MANITOBA TRANSPORTATION ACTION PLAN TO THE YEAR 2000

EXECUTIVE SUMMARY

By

John Heads

UNIVERSITY OF MANITOBA
TRANSPORT INSTITUTE

TRANSPORTATION INDUSTRY
DEVELOPMENT ADVISORY COMMITTEE

MANITOBA TRANSPORTATION ACTION PLAN

TO THE YEAR 2000

A REPORT TO THE TRANSPORTATION INDUSTRY DEVELOPMENT ADVISORY COMMITTEE

by

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January 1990

This project was commissioned by the Transportation Industry Development Advisory Committee, an independent committee advising the federal and provincial governments on transportation matters in Manitoba. The contents of the Action Plan reflect the opinions of the University of Manitoba Transport Institute. They are not to be construed as official policy of the Government of Canada or the Government of Manitoba.

90-06234/5

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The full findings of this research study are contained in a separate volume entitled "Research Report".

FOREWORD

The transportation industry is of special importance to the Province of Manitoba because of the industry's historic role as a major employer in the Province. It is essential that the employment opportunities offered by the industry over the decade of the 1990s be maintained and enhanced.

The 1980s have seen major changes to the transportation service industry. In addition to dynamic technological changes, the air and trucking modes were largely deregulated and regulation of the rail mode has been significantly altered. These changes have had an effect on the structure of the industry, and change in the future will be more rapid than in the past.

Similarly, the transportation equipment manufacturing industry has been the subject of technological innovation. In addition, the Canada/U.S. Free Trade Agreement and other world-wide changes that will affect trading patterns will render the marketplace for this industry even more challenging in the future than in the past.

While there are inherent economic advantages for the transportation industry in Manitoba, governments must continue to be mindful of the impact of their policies on the decisions made by the industry to locate, relocate or shift portions of operations into or out of the Province. This is especially important in Manitoba because of our heavy reliance on the industry to provide employment opportunities for our population.

The Transportation Action Plan to the Year 2000 is an independent study prepared by the University of Manitoba Transport Institute for the Transportation Industry Development Advisory Committee. The study systematically reviews the state of the transportation industry in Manitoba and identifies the foreseeable changes that will likely occur. The study is based on extensive research performed and information collected by the Transport Institute. The study sets forth targets for employment in each segment of the industry for the forthcoming decade and, based upon a comprehensive analysis, recommends the steps that should be taken by governments to achieve the targets.

Canada competes for industrial development with the United States and other countries. Manitoba competes with other Provinces. The study reminds us that we, in Manitoba, cannot be complacent. The federal and provincial governments must take initiatives and formulate policies that will cause the transportation industry to consider Canada and Manitoba attractive for growth and expansion. As we move foreword into the 1990s, the Action Plan should act as a guideline for these governments to achieve the objectives that must be met. Our population requires nothing less.

Marshall E. Rothstein, Q.C.
Chairman, Transportation Industry
Development Advisory Committee

ACKNOWLEDGEMENTS

In commissioning the present study, the Transportation Industry Development Advisory Committee (TIDAC) asked that the University of Manitoba Transport Institute (UMTI) consult extensively with the stakeholders in the transportation industries. Every effort has been made to carry out this request; Appendix 2 of the Research Report names the persons and organizations consulted. This is a formidable list of transport carriers, transport equipment manufacturers and transport labour unions; transport users in the manufacturing, mining and agricultural sectors; public interest groups; Regional Development Corporations; and representatives of governments.

UMTI is very appreciative of all the assistance received from the persons and organizations consulted in the study. Without their generous input of time and knowledge, it would not have been possible to have undertaken this work. It is heartening to see how generously Manitobans respond to transportation development studies of this type. Every effort has been made to ensure that the views expressed have been represented fully and accurately in this report; however, UMTI takes full responsibility for any errors and omissions.

With such a lengthy list of people consulted in the present study, it may seem invidious to single out those who have made particularly large contributions. However, it would also be ungrateful not to do so. I start with acknowledgement of the generous help and assistance received from the Co-Managers of the Federal-Provincial Transportation Sub-Agreement and their staffs, who provided excellent factual and critical input into the study. On the provincial side, I would acknowledge Co-Manager Jim Wallace, Executive Director, Transportation Policy, Programs and Research, Manitoba Department of Highways and Transportation and his staff members, especially Jack Craven, Wes Graham, Roly Savoie and Dennis Schaefer. I would also thank the Manitoba Department of Industry, Trade and Tourism and specifically Bob Jack, Barry Mitchell, and Mike Wallace for their

generous assistance. On the federal side, my thanks go to former Co-Manager Sandra Stoddart, Regional Director, Policy and Coordination, Transport Canada, and her successor, Gordon MacMichael. Statistics Canada has also been very helpful, both in the regional office in Winnipeg and in national headquarters.

The members of TIDAC have played a very important part in this study and I am appreciative of the valuable inputs received. Together with TIDAC Chairman, Marshall Rothstein, the names of the members are listed in Appendix 2, but they need to be recognized here. They are John Fehr, Reg Forbes, Ron Johnson, Rolly Painchaud, Ross Smith, and former TIDAC members Jim Campbell and Al Cerilli. I am particularly indebted to TIDAC Executive Secretary Don McCarthy, who has been a tower of strength throughout the study, well-organized, good-humoured and perceptive.

Finally, I wish to thank colleagues and consultants who have made major contributions to this work. These are named in alphabetical order: Murray Auld for assistance on aircraft manufacturing in Chapter 6; Norm Cameron for economic analysis contained in Chapters 1 and 11; Paul Earl for the contribution on quality of life in Chapter 1; Otto Lang, Chairman of UMTI, for continuous support; Ted Poyser for work on earlier planning exercises in Chapter 1 and on the Canada-United States Trade Agreement in Chapter 14; Betty Smith for expertise, patience and dedication in typing the whole report; Stan Spak, for conducting many interviews himself, accompanying me on many others and summarizing interview data in respect of most of Chapters 4, 7, 8 and 9; Vic Stechishin for technical input to Chapters 7 and 8; Ed Tyrchniewicz, formerly Director of UMTI, who planned the study and negotiated the research contract; and Stan Wallace, who conducted the research on technological developments and wrote Chapter 13.

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EXECUTIVE SUMMARY

OVERVIEW

In December, 1987, the Transportation Industry Development Advisory Committee (TIDAC) commissioned a research study with the University of Manitoba Transport Institute (UMTI) on a Transportation Action Plan for Manitoba to the year 2000. The study was to outline measures designed to maintain and enhance Manitoba's role as a transportation manufacturing and distribution centre. The research was:

- to describe the structure of the transport service and transport equipment manufacturing industries;
- to identify factors affecting their economic performance; and
- to set out targets for development to the year 2000.

TIDAC also called for extensive consultation with the stakeholders - government, industry and labour. The full research report is contained in a separate volume, which accompanies this Executive Summary.

Manitoba has been faced with two major problems in job creation in transport services and transport equipment manufacturing.

> Firstly, Winnipeg has always been a very important railway centre, but railway employment is declining in Manitoba as it is throughout Canada. A major challenge is to replace these jobs which are being lost on the railways. Secondly, Manitoba has only small representation in the manufacture of automobiles and automobile parts and accessories. These activities account for three-fifths of total employment in transport equipment manufacturing. In spite of impressive performance in aerospace and bus manufacturing, it is very difficult for Manitoba to make substantial progress when it is virtually shut out of three-fifths of the total employment opportunities in transport equipment manufacturing.

The present study outlines targets and makes recommendations to allow Manitoba to offset these negative factors and to maintain and enhance its role as a centre for transport services and transport equipment manufacturing. Currently, Manitoba accounts for 5.2% of total Canadian employment in transport services and transport equipment manufacturing, against a 4.1% share of Canadian population. If the various industry problems are not addressed, this share of transportation activity could shrink to 4.4% by the end of the century.

The study sets targets which would give Manitoba 5.5% of total Canadian employment in the transport service and transport equipment manufacturing industries by the year 2000. This would convert Manitoba from a province with a declining share of overall transportation activity to a province with an increasing share of this employment. This would be consistent with government policies for economic development in all the regions of Canada, especially in provinces like Manitoba which have been growing less rapidly than the country as a whole.

The governments already have in place the mechanisms necessary to achieve the objectives - Transport Canada and Western Economic Diversification at the federal level and Highways and Transportation and Industry, Trade and Tourism at the provincial level. However, democratic societies rely mainly on the free operation of market forces; governments do not have the power to direct industry in respect of the location of activities. The two levels of government must ensure that Manitoba is an attractive location for the transport service and the transport equipment manufacturing industries. They will have to work with a variety of groups, including municipalities, local economic development corporations and organized labour. But, most of all, they will have to work closely with the private sector to achieve successful implementation of the objectives specified.

The major objectives to be achieved are specified below, together with the number of additional jobs to be secured from the attainment of each objective.

Objective 1 Achieve the location of a Canadian Airlines International Limited overhaul base and other administrative functions in Manitoba - 600 jobs.

Objective 2 Secure increased Air Canada overhaul activity at the Winnipeg base - 200 jobs.

Objective 3 Expand Winnipeg's role as a centre for crew assignment and customer service activities - 100 jobs.

Objective 4 Ensure that Winnipeg continues to offer locational advantages for the Gemini Airline Reservation System - 100 jobs.

Objective 5 Ensure the continued expansion of the interprovincial trucking industry in Manitoba - 1,200 jobs.

Objective 6 Ensure that any consolidation of CP car maintenance activities takes place in Winnipeg - 1,000 jobs.

Objective 7 Avoid any loss of CN administrative jobs to Edmonton - 200 jobs.

Objective 8 Ensure the continued growth of the aircraft and parts manufacturing industry - 2,000 jobs.

Objective 9 Attract the location of plants manufacturing motor vehicle parts and accessories - 1,000 jobs.

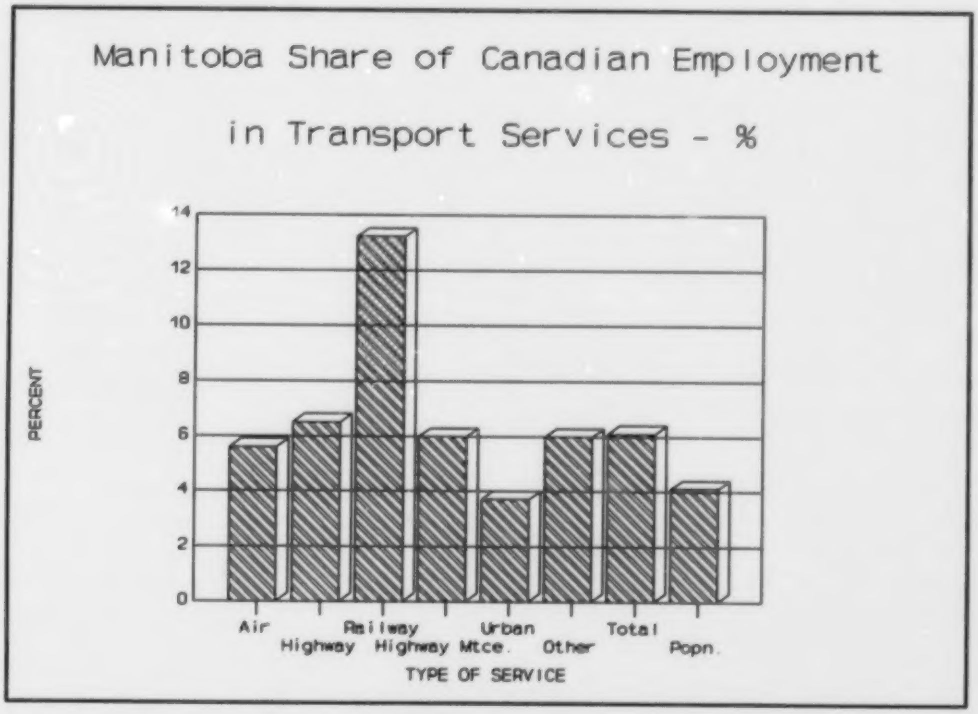
Objective 10 Ensure the continued development of bus and mobile home manufacturing - 600 jobs.

1. THE CURRENT SITUATION

Table E1 shows Manitoba employment in transport services. (Note that throughout this report 1989 figures are in fact November 1988/October 1989, as final figures were not then available for year 1989.)

Table E1: Employment in Transport Services - Manitoba

	1983 thousand	1989 thousand	Manitoba as a % of Canada 1989
Air transport	3.0	3.6	5.6
Highway transport	6.5	7.9	6.5
Railway transport	12.4	9.7	13.2
Urban transit	1.3	1.4	3.7
Highway and bridge maintenance	3.5	3.4	6.0
Other transport and services	2.4	2.5	2.2
Total	29.1	28.5	6.1
Manitoba share of Canadian population - %			4.1



Manitoba Share of Canadian Employment in Transport Services - %

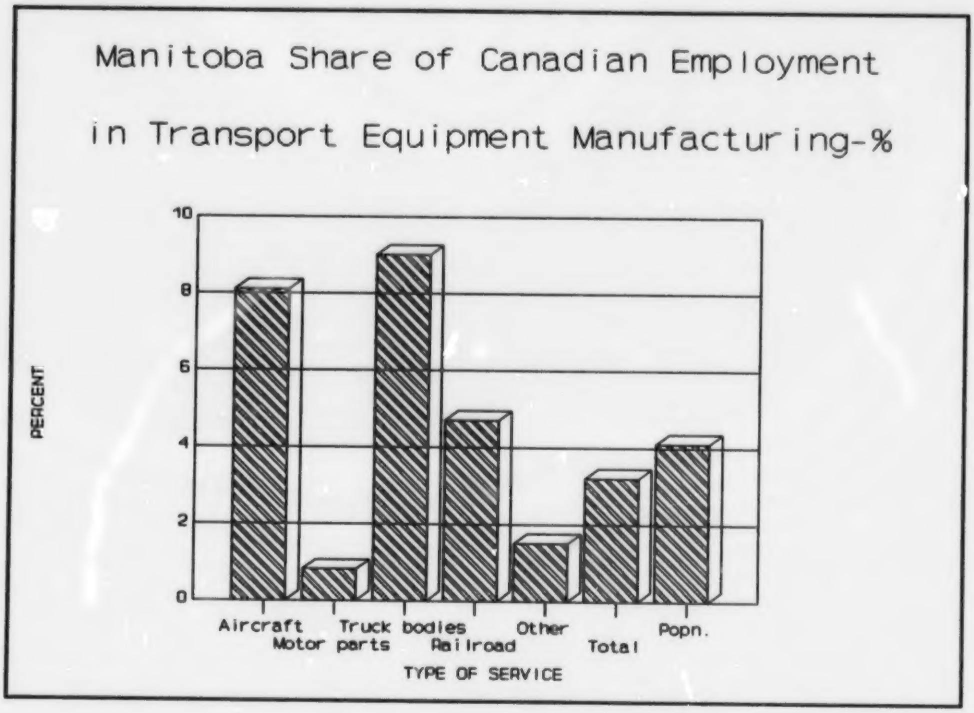
Note: Highway and bridge maintenance does not include the 1,300 workers in Manitoba identified by Statistics Canada in 1989 as working on the construction of highways, bridges and streets.

Winnipeg has always been a transportation centre and Manitoba has enjoyed a large share of total Canadian employment in transport services. In 1989, Manitoba accounted for 6.1% of total Canadian employment in transport services, against a 4.1% share of Canadian population. Manitoba is not losing out in its share of the individual transport modes, but it is suffering from heavy reliance on rail transport, where employment is declining rapidly throughout Canada. The challenge facing the province is to offset the declining opportunities for employment in railway transport.

The next table shows Manitoba employment in transport equipment manufacturing.

Table E2: Employment in Transport Equipment Manufacturing - Manitoba

	1981 thousand	1989 thousand	Manitoba as a % of Canada 1989
Aircraft and parts	2.6	3.6	8.1
Motor vehicles	n/a	0.2	0.4
Motor vehicle parts and accessories	0.5	0.6	0.8
Truck bodies and trailers	2.2	1.9	9.0
Railroad rolling stock	n/a	0.4	4.7
Other	n/a	0.3	1.5
Total	6.4	7.0	3.2
Manitoba share of Canadian population - %			4.1



Manitoba is important in the transport service industries and this could have been expected to have stimulated transport equipment manufacturing in the province. Yet, in spite of impressive performance in the aerospace and bus industries, this has not really happened. In 1989, Manitoba accounted for 3.2% of total Canadian employment in transport equipment manufacturing or less than its 4.1% share of Canadian population. The explanation is that Manitoba is virtually shut out of the motor vehicle and motor vehicle parts and accessories industries which account for almost three-fifths of total Canadian employment in transport equipment manufacturing.

The concerns of transport users in Manitoba are addressed more fully in section 10. Although specific problems continue to exist, complaints with respect to transport service quality and freight rates seem to be less frequent now than fifteen years ago. This was one of the more surprising findings of the present study.

2. FACTORS AFFECTING THE TRANSPORTATION INDUSTRIES

This section summarizes those parts of the study dealing with the Manitoba economy and other external and policy factors affecting transportation.

(a) The Manitoba Economy

The Manitoba economy and likely developments to the year 2000 were examined, because these will substantially determine the demand for freight and passenger transport originating in the province. Population increase has been proportionately less in Manitoba than in Canada for almost sixty years. Employment opportunities have also grown less rapidly. Wages and salaries and personal income per head are below the national average, but so are consumer prices. The unemployment rate in the province has generally been less than the national figure, in part because of out-migration of population.

However, the degree to which Manitoba has lagged behind Canada in terms of growth and economic prosperity has never been sufficiently great to be burdensome. Since the Second World War, the main areas of growth in Canada have been the provinces of Ontario, British Columbia and Alberta. Manitoba has fared at least as well as Quebec and Saskatchewan and far better than the four Atlantic Provinces.

The examination of economic trends in Manitoba to the end of the century suggests "much of the same". The population of Manitoba was 1,084,000 at June 1, 1989 and this amounted to 4.1% of the Canadian total. By the year 2000, the population is forecast to be 1,178,000 or 3.9% of the Canadian total. There are fewer Manitobans left on the farms than in earlier decades and this will reduce the potential outflow of migration. Manufacturing employment will remain fairly stable and employment growth will be in the service sectors of the economy. The population is aging, but not at a sufficiently rapid rate to have substantial effects on the transportation scene before the turn of the century.

People retiring in the 1990s will be those born in the 1930s, when birth rates were relatively low. The baby boomers born after the Second World War will not be retiring in large numbers until well beyond the turn of the century.

(b) Canada-United States Trade Agreement

The Canada-United States Trade Agreement (CUSTA) does not include the transport service industries, but it is possible that this could change before the year 2000. The pattern of transport demand is already subject to change in that CUSTA should lead to increased north-south trade. However, the change in trading patterns will probably take considerable time to materialize. Large proportions of Canada-U.S. trade were not dutiable even before CUSTA. UMTI has estimated that CUSTA will cause the average delivered price of all Canadian exports to the U.S. - dutiable and non-dutiable together - to fall by only 0.3% per annum over the next decade. With higher Canadian tariffs, the comparable price fall for U.S. exports to Canada would be greater, perhaps 0.6% per annum.

In 1989, these changes from CUSTA were swamped by appreciation of the Canadian dollar as against the U.S. dollar - the value of the Canadian dollar in December, 1989 was U.S. 86.2 cents or 3.0% higher than in December, 1988. However, the Canadian dollar fell substantially in January, 1990, and by the end of the month it was at U.S. 84.2 cents or about the same as a year ago. On January's experience, exchange rate appreciation should not nullify the effects of CUSTA in 1990.

(c) Energy

Fuel accounts for a substantial proportion of the operating expenses of transportation companies - in Canada, 19% for airlines, 12% for motor carriers and 9% for railways. Transportation accounts for 29% of energy utilization in Canada and, in spite of fuel economies, this proportion has not gone down as a result of the energy crisis. Although the experts are divided there is no strong evidence to suggest any vast changes in the relative price of energy before the mid-1990s. It is therefore assumed that energy considerations will not have a major disruptive influence on the transportation industries.

(d) Environmental Considerations

Increased concern in respect of the environment and sustainable development is already apparent in Canada and this will have repercussions on transportation. For example, the Province of Manitoba has reflected these concerns by forming a committee to ensure coordination between new residential construction and the operational needs of the Winnipeg International Airport, with particular reference to problems of noise and night flying.

The present study has briefly reviewed the impact of environmental considerations on transport in respect of the movement of dangerous goods, air pollution, noise, ground reverberation and urban "gridlock". Attention to environmental concerns may tend to increase the overall cost of transport, at least in the short period, but the effect will not be uniform on all transport modes and all geographical areas. Specifically, a sparsely populated area, such as Manitoba, would be less affected than more crowded metropolitan areas in eastern Canada and the United States and this could offer new opportunities for Manitoba, for example as a distribution point for air freight.

(e) Transport Policy

The study reviews the transport policy framework in Canada, which is, of course, a subset of the overall political framework. During recent years, transport policy in Canada has been characterized by increased reliance on competitive market forces, privatization of publicly owned transport carriers, and an attempt to reduce government subsidization of transport. Reliance on market forces is likely to continue as the dominant influence on the transport policy framework until the mid-1990s. By then, given the inevitable swings in the pendulum of political change, reliance on market forces may have peaked and economic interventionism may become more popular.

The Western Grain Transportation Act is reviewed briefly, together with the current controversy on whether payments under this legislation should be made to the railways, as at present, or directly to the producers. Because of an ongoing in-depth analysis requested by the Manitoba Minister of Agriculture from the Manitoba Agricultural Advisory Council, no recommendations are made on this issue. Nevertheless, any change in method of payment could have substantial transportation impacts - less movement of grain in total because of increased farm feeding, but some shift in the movement to trucks, with adverse impacts on railway traffic, elevator operations and road maintenance costs.

Transport subsidies are examined. On the latest published figures of consolidated expenditures on transport by all levels of government in Canada - federal, provincial and municipal - the total outlay was $7.9 billion in 1983/84, of which a substantial preparation was not recovered through user charges. Current federal policy is to reduce these subsidies.

In transport regulation, the new National Transportation Act became law in January, 1988 and the new Motor Vehicle Transport Act is currently in process of deregulating the interprovincial trucking industry. New safety legislation has also come into effect in the rail and highway modes. Apart from possible change to the Western Grain Transportation Act, significant regulatory legislation is not expected in the transportation field before the mid-1990s, following the statutory review of the National Transportation Act required in 1992.

(f) Government Procurement

Government purchases of capital equipment and materials have the capacity to influence the location of industry and this is particularly important in aerospace manufacturing. In 1987-88, the Manitoba share of federal government procurement expenditures was 3.5%, against a 4.1% share of population. This happened to be a good year for Manitoba, with large contracts in the aerospace industry; averaged over the five fiscal years ending in 1987/88, the Manitoba share of federal government procurement expenditures was only 2.7%.

(g) Taxation

In terms of taxation, a province cannot afford to be out of line with competitive jurisdictions or it will lose investment opportunities. The taxation burden, both personal and corporate, is on the high side in Manitoba compared with the other Western Provinces, although this differential is less marked than it was two years ago. In addition, Ontario is ceasing to be much more attractive than Manitoba. In corporate taxation, the major complaint of those interviewed in the present study related to the payroll tax, but the railways also had strong objection to the tax on locomotive fuel. In terms of municipal taxation, Winnipeg is a high cost city. The low taxation mecca to Manitobans is Alberta and the level of taxation is indeed much lower in that province.

3. AIR TRANSPORT

Table E3 shows employment data for air transport. Three figures are shown for Manitoba in the year 2000 - the target employment, the outcome if Manitoba were to maintain its 1989 share of Canadian employment in air transport, and a "no progress" scenario. For Canada as a whole, the three figures for the year 2000 are, of course, identical.

Table E3: Employment in Air Transport

	Manitoba thousands	Canada thousands	Manitoba %
Actual 1983	3.0	50.8	5.9
Actual 1989	3.6	63.9	5.6
Forecasts 2000			
No progress	4.2	86.0	4.9
Maintain % share	4.8	86.0	5.6
TARGET	**5.2**	**86.0**	**6.0**

(a) Current Situation

Manitoba accounted for 5.6% of total Canadian employment in air transport in 1989, against a 4.1% share of Canadian population. Air transport employment in Manitoba totalled 3,600. Roughly 1,800 jobs served local demand, mainly services between Winnipeg and other Canadian cities and the U.S., air services for northern Manitoba, and employment in running the airports themselves.

The remaining 1,800 jobs in 1989 were to provide services not necessarily tied to the province. These consisted of the Air Canada Finance Branch (570 jobs), the Air Canada overhaul base (470 jobs), the Gemini Airline Reservation System (160 jobs), and other Air Canada and Canadian Airlines International Limited (CAIL) activities such as crew assignment and regional headquarters functions (600 jobs).

(b) The Year 2000

Air transport is the most rapidly growing transport mode in Canada and the number of jobs serving local Manitoba demand will increase over the coming decade. Assuming a rate of increase similar to that for Canada as a whole to the year 2000, this part of the Manitoba industry would generate 600 additional jobs. Even on a "no progress" scenario, air employment would increase by roughly this amount to a total of 4,200 jobs in the year 2000.

An increase beyond this figure must come from employment in those air transport activities not necessarily tied to the province. To achieve this, four objectives are specified below. It will be noted that the list does not include the Air Canada Finance Branch. This is not an expanding operation in terms of employment, as the automation of procedures has more than offset the growth in airline travel.

The four objectives which must be attained to achieve the target employment for air transport in Manitoba are summarized as follows:

Objective 1 Achieve the location of a Canadian Airlines International Limited overhaul base and other administrative functions in Manitoba - 600 jobs.

At present CAIL has only line maintenance activities in Manitoba, essentially to service the traffic generated within the province, and the administrative functions located in Winnipeg are confined to the region covering Northwest Ontario, Manitoba and Saskatchewan. The province is already making efforts to encourage increased CAIL employment. This is particularly important in the next few months as CAIL seeks to rationalize both its administrative structure and the location of its overhaul facilities. The target in the present study calls for a CAIL overhaul base in Winnipeg, together with the transfer of other CAIL head office functions, for an employment impact of 600 jobs. This target could, of course, be achieved in stages, with the first expansion of CAIL a full-service maintenance base, which would provide less employment than a complete overhaul base.

Objective 2 Secure increased Air Canada overhaul activity at the Winnipeg base - 200 jobs.

The B-727 overhaul will be phased out starting in 1990 and Air Canada plans to replace this with A320 heavy maintenance in Winnipeg. However, a firm commitment has not yet been made and the provincial government needs to press for definite assurance and to explore the possibilities for additional expansion. An increase of 200 jobs is set for the year 2000. This would probably mean that an increased proportion of total Air Canada maintenance would be carried out in Winnipeg, given a long-term trend toward reduced maintenance work as a result of improved aircraft technology.

Objective 3 Expand Winnipeg's role as a centre for crew assignment and customer service activities - 100 jobs.

Air Canada and CAIL provide employment not necessarily tied to Manitoba by the use of Winnipeg as a base for crew assignment and the location of sales and reservations functions serving areas outside Manitoba. Winnipeg is the only pilot and co-pilot assignment base for Air Canada between Toronto and Vancouver, although flight attendants are also assigned at Calgary. Winnipeg is the only CAIL base for flight attendant assignment between Toronto and Alberta, but pilots will not be assigned at Winnipeg after September, 1990. Air crew and customer service employment should increase over the next decade, although the prospects for pilots are less promising with reduced size of flight crews in newer aircraft. The target for increased employment in crew assignment and customer activities is therefore set at a fairly modest 100 jobs.

Objective 4 Ensure that Winnipeg continues to offer locational advantages for the Gemini Airline Reservation System - 100 jobs.

Gemini is anticipating increased employment of some 50 jobs by approximately 1991. The airline reservations systems in North America are presently in a state of flux, which makes forecasting very difficult. Gemini is owned on an equal basis by Air Canada, CAIL and Covia. (Covia is a U.S. system associated mainly with United Airlines.) A target increase for Gemini of 100 jobs is specified for the year 2000.

(c) Achievement of Objectives

In a free enterprise economy, there are limits to the extent to which government can influence the location of economic activity. The objectives specified for air transport in Manitoba can only be achieved if the private sector firms in the industry are convinced that it is in their economic interest to locate additional activities in the province. In terms of balanced regional development, the federal government has an interest in encouraging transport activities in Manitoba. The interests of the provincial government are self-evident. The two governments must work together to create the environment in which the private sector will be encouraged to attain the objectives which have been enumerated.

Specifically, this includes the need to:

(i) improve training facilities for aircraft overhaul technicians in the Red River Community College and similar institutions, as inadequate training facilities have been identified as a major problem by the Manitoba air transport industry;

(ii) increase the availability of computer skills in Manitoba needed by "high tech" industries such as Gemini;

(iii) ensure that the labour intensive activities of aircraft overhaul are not impeded by financial burdens, such as payroll tax;

(iv) allow competition in telecommunications, which would result in lower telecommunication costs incurred by the Gemini System and reduce the danger of relocation south of the border, where such charges are already lower;

(v) market Manitoba as a location for air transport activities in terms of:
- the central location of Winnipeg, which reduces unnecessary aircraft mileage in overhaul operations,
- the recognized productivity of Manitoba labour in overhaul activities, hopefully soon to be further improved by better training facilities,
- the synergies, such as ready availability of labour and parts, to be achieved by locating air transport activities in a centre where the aerospace manufacturing industry is also growing strongly;

(vi) utilize, as in many development initiatives, federal and provincial political and financial inducements to achieve the objectives specified.

4. HIGHWAY TRANSPORT

Employment data for highway transport are presented in Table E4. The employment figures do not include broker-operators, who work on contract for the trucking industry and are not technically employees; these numbered approximately 1,700 in Manitoba in 1989. The official employment figures therefore underestimate the full impact of the trucking industry in terms of jobs both in Manitoba and in Canada.

Table E4: Employment in Highway Transport

	Manitoba thousands	Canada thousands	Manitoba %
Actual 1983	6.5	104.0	6.2
Actual 1989	7.9	121.1	6.5
Forecasts 2000			
No progress	7.7	136.0	5.7
Maintain % share	8.8	136.0	6.5
TARGET	**9.4**	**136.0**	**6.9**

(a) Current Situation

Manitoba accounted for 6.5% of total Canadian employment in highway transport in 1989, as against the province's 4.1% share of Canadian population. This large share of highway transport employment is largely because nine of Canada's thirteen large interprovincial motor carriers are headquartered in Manitoba. These are:

Arnold Brothers Transport Ltd
Atomic Transportation System Inc
Canadian Motorways Ltd
Imperial Roadways Ltd
Kleysen Transport Ltd
Paul's Hauling Ltd
Penner International Inc
Reimer Express Lines Ltd
TransX Ltd

Eight of these are headquartered in Winnipeg, while Penner is in Steinbach. For the record, the four companies not headquartered in Manitoba are the Alltrans Express

Division of TNT Canada Inc and CP Express and Transport, both headquartered in Toronto; Day and Ross Inc, headquartered in New Brunswick; and Trimac Transportation Services Ltd, headquartered in Calgary.

Companies headquartered in the province have a substantial employment impact; in addition to administrative, terminal and garage personnel, a large proportion of the highway drivers are also recruited here. The nine large interprovincial and international motor carriers headquartered here provided some 3,700 jobs in Manitoba in 1989 and, of course, substantial employment elsewhere in Canada.

The other 4,200 Manitoba jobs in highway transport in 1989 were provided by intraprovincial motor carriers; household movers; large carriers headquartered out-of-province; other interprovincial and international carriers not listed in the top thirteen; and the 500 employees of the intercity bus industry.

(b) The Year 2000

As already indicated, 4,200 Manitoba highway transport jobs in 1989 were provided by employers other than the nine leading carriers. Intraprovincial trucking has been in decline and this is expected to continue. Some of the smaller interprovincial and international carriers are growing, some declining, but the aggregate of their employment is not likely to change markedly. With the cutback in VIA Rail service, there will be some increased demand for intercity bus services. For all these groups together, a modest employment increase of 300 jobs is forecast to the year 2000. This would give a total of 4,500 jobs.

The nine large motor carriers headquartered in Manitoba will be faced with considerable challenges over the next decade. Regulatory reform is expected to reduce the number of firms in the interprovincial trucking industry. The Manitoba industry could also be adversely affected by the Canada-U.S. Trade Agreement, which will increase north-south traffic, as against east-west traffic. Manitoba has a much lower share of international than of interprovincial traffic. For geographical reasons, interprovincial traffic is more likely to be routed through Manitoba than international traffic and it is unrealistic to expect that the total effect of shifts in traffic patterns can be entirely offset by the Manitoba industry.

U.S. carriers will also compete more strongly and they tend to have only a sales office and local distribution arrangements in Canada, relying on U.S. personnel for line-haul driving and major repairs. From the standpoint of taxation and operating authorities in the United States, large Canadian carriers could find it advantageous to relocate south of the border. Many already have U.S. operations. Within Canada, there is the attraction of Alberta and, with some 13,000 employees, this province already has a much larger trucking industry than Manitoba.

If the interprovincial trucking industry in Manitoba were to follow the national trend in trucking employment, the nine firms headquartered in Manitoba would provide 4,300 jobs in the year 2000, against 3,700 in 1989. A target for Manitoba to acquire yet one more large interprovincial trucking firm would raise the figure to 4,900. This is an increase of 1,200 jobs on actual employment in 1989 and requires the attainment of:

Objective 5 Ensure the continued expansion of the interprovincial trucking industry in Manitoba - 1,200 jobs.

However, the process of achieving increased employment in interprovincial trucking is not likely to be by persuading an existing carrier to relocate, but rather through ensuring that Manitoba presents the most attractive location for the headquarters of the firms that will emerge victorious from the competition and consolidations of the next few years. Failure to achieve this objective could result in a considerable loss of trucking jobs and employment in the year 2000 could fall below the figure currently recorded for 1989.

(c) Achievement of Objectives

As in the case of air transport, the increased employment in highway transport can only be achieved if the private sector firms in the industry are convinced that it is in their economic interest to locate additional activities in the province. Specifically, this requires that the **federal government**:

(i) ensure that the tax burden on trucking is not out of line with U.S. jurisdictions in respect of income tax rates, depreciation write-offs of equipment, and fuel taxes;

(ii) make a federal contribution for improvements to the National Highway System, which has recently been identified by the Roads and Transportation Association of Canada (RTAC) and adopted by the Council of Ministers Responsible for Transportation and Highway Safety.

The next six requirements relate to the **provincial government**. However, it should be recognized that much has been done here in the last two years to improve the operating environment for the trucking industry in Manitoba in respect of matters as Workers Compensation, Autopac, payroll tax on out-of-province drivers and expenditures on highway construction and maintenance. There is still need to;

(iii) give exemption from payroll tax on head office operations of trucking companies in Manitoba;

(iv) extend the recently increased national limits on weights and dimensions beyond that part of the highway system already covered in Manitoba, as roads and structures are upgraded;

(v) continue increased levels of expenditures on highway maintenance and construction;

(vi) continue the high priority presently given to providing four lanes on the remaining 51 kilometres of Highway #75 between Winnipeg and the U.S. border;

(vii) market the advantages offered to the highway transport industry by the central location of Manitoba in terms of convenience in the logistics of truck operations, excellent air services for business travel, optimal communications in the centre of the Canadian time bands, and a highly productive labour force;

(viii) utilize, as in many development initiatives, political and financial inducements to achieve the objectives specified.

Finally, the **City of Winnipeg**:

(ix) should apply the recently increased national limits on weights and dimensions to the main truck routes within the city.

5. RAILWAY TRANSPORT

Employment data for railway transport are presented in Table E5

Table E5: Employment in Railway Transport

	Manitoba thousands	Canada thousands	Manitoba %
Actual 1983	12.4	95.7	12.9
Actual 1989	9.7	73.5	13.2
Forecasts 2000			
No Progress	5.7	50.0	11.4
Maintain % share	6.6	50.0	13.2
TARGET	**6.9**	**50.0**	**13.8**

(a) Current Situation

Manitoba has an extremely high share of Canada's railway employment. CN Rail provided 6,200 jobs in Manitoba in 1989. The Transcona Shops carry out CN heavy maintenance of rail cars and locomotives for the whole of Canada and employment in the transportation functions at Symington Yard far exceeds the requirements attributable to traffic originating in or destined for Manitoba. CP Rail provided 2,900 jobs in 1989. Although CP has centralized activities in Winnipeg less than CN, nevertheless the Weston Shops provided over 800 jobs. VIA Rail provided 600 jobs in Manitoba in 1989; as a result of service cutbacks in Via Rail, over 200 of these jobs were lost in January 1990.

(b) The Year 2000

Railway employment in Canada will decline to the end of the century and beyond. This is due to a combination of technological and economic reasons - better rail and track, stronger and larger capacity cars, better locomotives, cabooseless trains, and abandonment of low density branchlines. Further declines in railway employment in Manitoba are inevitable; an "action plan" may reduce the rate of decline, but it will not stop it. Excluding for later consideration the CP jobs in the Weston Shops and CN employment in regional headquarters in Winnipeg, there were 8,400 railway jobs in Manitoba in 1989. If these fall by 32%, as forecast for Canada as a whole, they would number only 5,700 by the year 2000.

The target for railway employment in Manitoba in the year 2000 is specified at 6,900 jobs. The additional 1,200 jobs in the target are to be obtained from achieving two objectives:

Objective 6 Ensure that any consolidation of CP car maintenance activities takes place in Winnipeg - 1,000 jobs.

The heavy car maintenance activities of CP Rail are split between Calgary and Winnipeg. At present, CP Rail has not indicated any intention to consolidate these activities. However, with improved quality of rail cars and reduced maintenance requirements and in light of the consolidation already completed by CN Rail, it is likely that CP will decide to consolidate this activity in one or other location within the time horizon of our study. Any consolidation of CP car maintenance should be in Winnipeg; this gives the potential for 1,000 jobs in the year 2000 and probably more jobs in the intervening period.

Objective 7 Avoid any loss of CN administrative jobs to Edmonton - 200 jobs.

CN Rail is still operating with a Regional Headquarters in Winnipeg, while CP Rail has consolidated its regional activities in the two locations of Toronto and Vancouver. In the case of CN, any concentration of regional jobs would probably be in Edmonton and it is in Manitoba's interests to avoid the job loss that this would imply.

(c) Achievement of Objectives

Manitoba must ensure that it is an attractive place to do business for the railways and that the historic advantages of Manitoba in railway operations can continue to be exploited, even in a downsizing situation. Employment in the railway industry will still decline very substantially, but at least Manitoba will retain as many jobs as possible, bearing in mind that the railways provide the highest average weekly earnings of all transport modes in Canada.

Perhaps, in the past, railway employment like trucking employment has been rather taken for granted in Manitoba. There has been too little appreciation of the fact that many of the jobs in transport comprise a service export from Manitoba to other parts of Canada. Hopefully, this is changing, but problems still remain. Specifically, there is need to:

(i) maintain a continuing dialogue with the railways to facilitate their maximum input to the Manitoba economy;

(ii) review the provincial diesel fuel tax, to which the railways object vociferously on the grounds that their infrastructure costs are not met from the public purse;

(iii) examine the impact of potential increases in property taxes on railway right-of-way, especially in respect of low density branchlines;

(iv) assess the overall role of rail transport in northern Manitoba, with respect to the railway view that there is presently inadequate traffic in northern Manitoba for the levels of rail and highway transport currently provided.

6. THE PORT OF CHURCHILL

Although a visit was made to Churchill in late 1988, the present study did not include any in-depth examination of the port. The most recent detailed study of the Port of Churchill was completed by the IBI Group in early 1986. This concluded that the port could be viable on a minimum grain throughput of 600,000 tonnes of grain per year, but that this should preferably be in excess of 800,000 tonnes. IBI could not find any other commodities that could be economically shipped through Churchill to broaden the export base beyond grain. However, extension of the season from the present dates of July 26/October 18 to July 20/November 15 did not seem to present much difficulty. The resupply operations through Churchill to serve communities in the Central Arctic could be expanded, but only subject to resolution of a number of severe constraints.

After the IBI report was completed, Churchill had reasonable grain shipments in 1986 and 1987; however only two ships were loaded in 1988 and total shipments in 1989 amounted to only 292,000 tonnes. Arctic resupply operations from Churchill always face heavy competition from the Eastern Canadian marine movement and from air resupply originating south of Churchill. Overall prospects for the Port seem less promising than at the time of the IBI study.

However, the future of Churchill cannot be settled purely in terms of transportation economics. The policy over the last two decades seems to have been to regard the Port as a marginal operation for grain exports, with occasional substantial infusions of funds. If Churchill is required in terms of national considerations - defence, sovereignty and northern development - the question to be addressed is not whether Churchill should survive, but what is the most effective combination of activities in grain transport, northern resource development, tourism and services for the north to allow this survival.

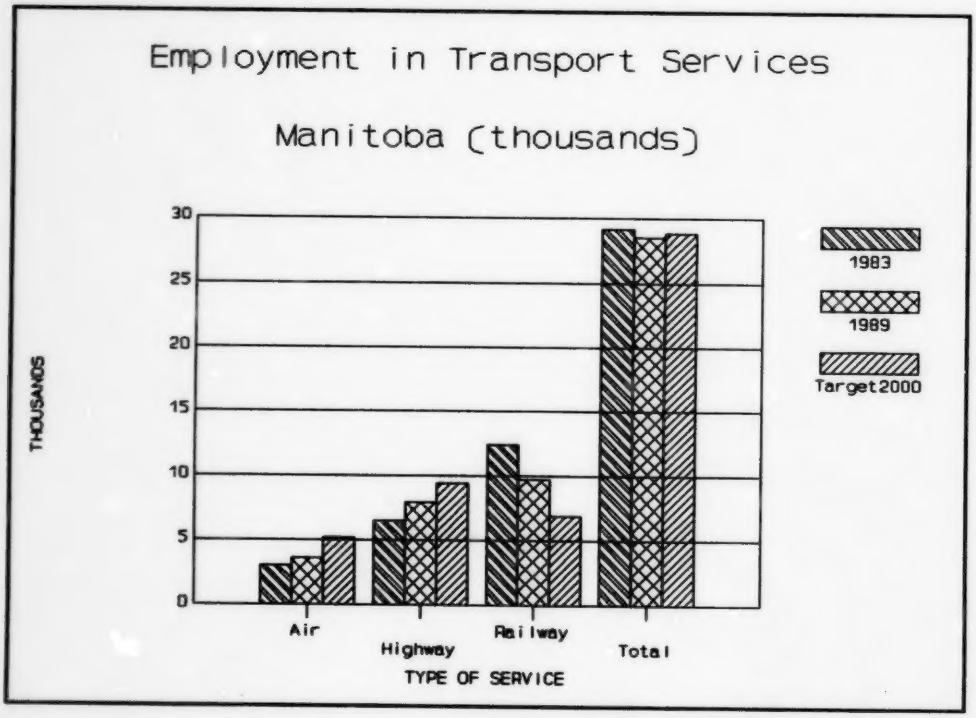
7. OTHER TRANSPORT SERVICES

The employment targets for the air, highway and railway modes are now brought together with the other transport service sectors.

Table E6: Employment in Transport Services - Manitoba

thousands

	1983	1989	No Progress 2000	Maintain % share 2000	Target 2000
Air	3.0	3.6	4.2	4.8	5.2
Highway	6.5	7.9	7.7	8.8	9.4
Railway	12.4	9.7	5.7	6.6	6.9
Urban	1.3	1.4	1.5	1.6	1.5
Highway mtce	3.5	3.4	3.4	3.6	3.4
Other	2.4	2.5	2.4	2.5	2.4
Total	29.1	28.5	24.9	27.9	28.8
Manitoba share of Canadian total - %	6.3	6.1	5.1	5.7	5.9



Urban transit serves the local Manitoba market. This is also true of the broad category of "other" activities, which includes water transport, taxis, travel agents, airport limousine drivers and ambulance services, without giving a complete list of every activity in this category. Highway and bridge maintenance contributes to the export performance of the Manitoba trucking industry, but employment is still mainly a function of Manitoba's population and tax base. Employment in these three sectors is expected to show little growth in Canada; it will grow less in Manitoba, because our share of Canadian population is expected to fall slightly.

Employment in the transport service industries for Canada as a whole is only expected to rise by a modest 4% to the year 2000 and this is consistent with the slow growth of recent years. Even if the transport targets for Manitoba are all attained, employment in the year 2000 is expected to be only marginally higher than in 1989. This results from the heavy burden of declining railway employment and underlines the urgency of achieving the various objectives specified in this study.

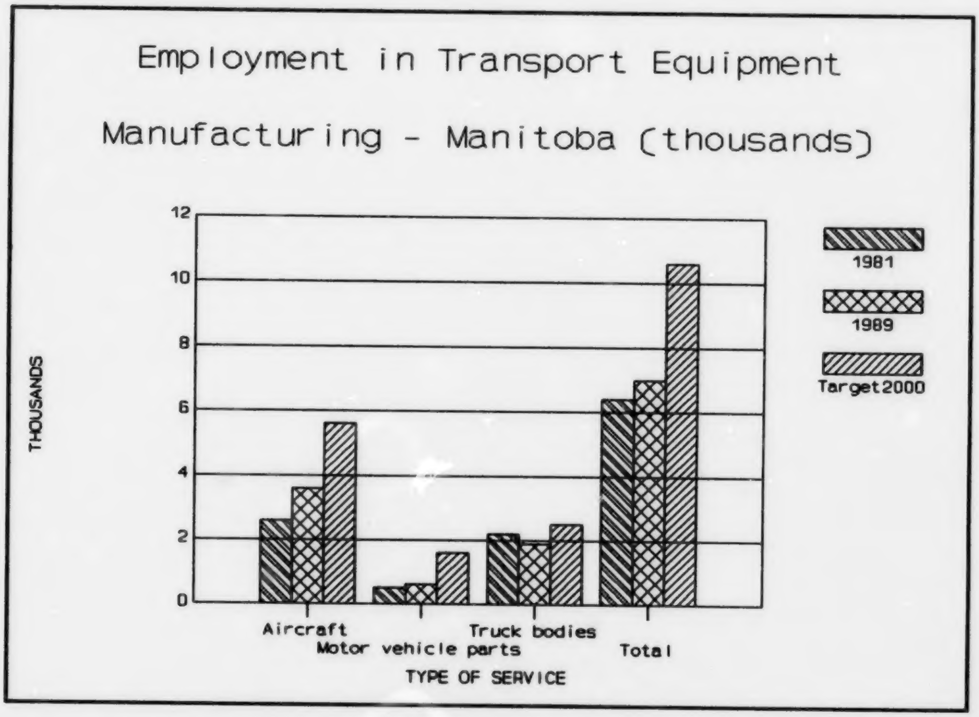
8. TRANSPORT EQUIPMENT MANUFACTURING

Data on transport equipment manufacturing in Manitoba are shown in Table E7. After the food industries, transportation equipment is the second most important industrial manufacturing group in Manitoba.

Table E7: Employment in Transport Equipment Manufacturing - Manitoba

thousands

	1981	1989	No Progress 2000	Maintain %share 2000	Target 2000
Aircraft and parts	2.6	3.6	3.6	4.3	5.6
Motor vehicles	n/a	0.2	0.2	0.2	0.2
Motor vehicle parts and accessories	0.5	0.6	0.6	0.6	1.6
Truck bodies and trailers	2.2	1.9	1.9	2.2	2.5
Railroad rolling stock	n/a	0.4	0.4	0.4	0.4
Other	n/a	0.3	0.3	0.3	0.3
Total	6.4	7.0	7.0	8.0	10.6
Manitoba share of Canadian total - %					
	3.6	3.2	3.0	3.5	4.6



(a) Current Situation

Aircraft and aircraft parts account for half the employment in Manitoba's transportation equipment manufacturing and this industry is a very buoyant sector of the Manitoba economy. Winnipeg is the third largest aerospace manufacturing centre in Canada. The industry has now reached critical mass size, allowing external economies of scale and providing an adequate base for future expansion. Bristol Aerospace and Boeing each have over 1,000 employees and there are only two other manufacturing firms in the whole of Manitoba of this size. In October, 1989, Hughes Aircraft Company announced that it was to develop in Winnipeg a monitoring system for diagnosing engine noise in aircraft. The Manitoba aerospace industry is further enhanced by the Air Canada overhaul base, which is included in air transport and not in the statistics of manufacturing employment. If CAIL were to establish an overhaul base here, this would add even more strength to the industry.

The next most important sector of Manitoba's transport equipment manufacturing industry is truck bodies and trailers, consisting mainly of bus and mobile home manufacture. Motor Coach Industries Ltd. is one of only four Manitoba manufacturing firms providing over 1,000 jobs. New Flyer Industries Limited produces buses for the urban transit market. Triple E Canada at Winkler is the major mobile home manufacturer.

The remaining transportation equipment manufacturing sectors in Manitoba provided only 1,500 jobs in 1989. Three-fifths of Canada's transportation equipment manufacturing is in motor vehicles and motor vehicle parts and accessories. Manitoba has only 0.6% of this employment and is therefore almost locked out of this important industrial sector. Manitoba has 400 jobs in the manufacture of railroad rolling stock and 300 jobs in other transport manufacturing, mainly boatbuilding on Lake Winnipeg. These are not regarded as having any substantial growth potential.

As part of the present study, UMTI commissioned a special report by the Ottawa firm of R.S. Wallace and Associates on future technological trends in the transport industries. Airport technologies identified in the Wallace Study as promising for Manitoba included: total aircraft overhaul; engine component manufacturing and overhaul; assembly of complete modular aircraft sections; and airframe component manufacture, including use of composite materials and structures. In truck bodies and trailers, the Wallace Report identified more comfortable passenger systems; special use bus bodies, e.g. for the handicapped; and lower weight recreational vehicles. Often in Canada, alarm is expressed in respect of "branch plant economies". It is interesting to note that the Wallace Report tended to be favourable towards the "branch plant" concept, particularly in the aerospace industry. It can be very satisfactory to be part of a large foreign firm, especially if the Canadian subsidiary has world mandates for high value products.

(b) The Year 2000

In transport equipment manufacturing, Manitoba is fortunate in that its main employment is in the manufacture of aircraft and associated parts, which is expected to be the most rapidly growing part of the industry. Three objectives are specified.

Objective 8 Ensure the continued growth of the aircraft and parts manufacturing industry - 2,000 jobs.

Manitoba currently accounts for some 8.1% of total Canadian employment in the manufacture of aircraft and aircraft parts and this share has increased appreciably during the 1980s. The target calls for a growth in Manitoba's share of this industry to 10.5% by the end of the century. Substantial progress has already been achieved and the industry has now reached critical size, realizing external economies of scale and providing, to some extent, its own momentum for further growth. The development of this industry is already a prime objective of the Manitoba Department of Industry, Trade and Tourism and this priority should continue.

Objective 9 **Attract the location of plants manufacturing motor vehicle parts and accessories - 1,000 jobs.**

It is not expected that a motor vehicle manufacturer will locate in Manitoba. Prospects are better for local manufacture of motor parts and accessories, even though this has been pursued over the last two decades with little success.

The historic preference of the motor vehicle industry has been to have all of the plants supplying parts and accessories located within 400 miles of Detroit/Windsor. However, in 1988, Magna International Inc. established a motor vehicle parts plant in Nova Scotia and this is farther than Manitoba from the Detroit/Windsor centre of gravity. If a parts plant is feasible in Nova Scotia, why not in Manitoba? Earlier in this summary, it was pointed out that, in many development initiatives, there is often a combination of federal and provincial pressures and financial inducements, subtle and not so subtle, to achieve objectives. It is only by a firm commitment of federal and provincial governments that Manitoba can achieve any substantial breakthrough into this very large sector of transport equipment manufacturing.

Objective 10 **Ensure the continued development of bus and mobile home manufacturing - 600 jobs.**

Given problems of over-capacity of the bus industry in North America and the lack of success of the recent federal-provincial urban bus program in Manitoba, it is unrealistic to expect more than modest growth in bus employment. The mobile home industry has more potential, in spite of considerable fluctuations in employment in the Manitoba industry in recent years. Although the aging of the population of Canada will be less pronounced in the coming decade than in the years after the turn of the century, nevertheless this aging is proceeding and seniors are regarded as good customers for mobile homes.

(c) Achievement of Objectives

It has already been pointed out that, in a free economy, there are limits on the extent to which government can influence the location of economic activity. The objectives specified for transport equipment manufacturing in Manitoba can only be achieved if the private sector firms in the industry are convinced that it is in their economic interest to locate additional activities in the province. Increased transport equipment manufacturing is consistent with federal government objectives to increase economic activity in low growth areas. The Manitoba Department of Industry, Trade and Tourism has already identified the transport equipment industry, particularly aerospace manufacturing, as a prime growth area. The two governments must work together to create the environment in which the private sector will be encouraged to attain the objectives which have been enumerated.

In respect of the manufacture of aircraft and aircraft parts, this includes the need to:

(i) expand the range of aeronautical training courses available in Manitoba, where requirements were expressed by industry in the areas of robotics, computer programming and control, and aircraft repair and maintenance - in view of the strong representations from industry in the course of the present study, action in this area must take high priority;

(ii) ensure that the Manitoba aerospace industry obtains an adequate share of federal government contracts - although the loss of the CF-18 contract in late 1986 is still a source of resentment, Manitoba must follow the example set by Bristol Aerospace and look to the future rather than to the past;

(iii) continue to market on a world-wide scale the attractions of Manitoba for aircraft overhaul and manufacture, stressing the convenience of the central location in Canada, the uncluttered airspace of Manitoba, the high quality of labour and the relative unimportance of transport costs in aerospace manufacturing.

In respect of the manufacture of motor vehicle parts and accessories, successful exploitation of this industry on any substantial scale has eluded the province for very many years. The Manitoba disadvantage as against locations nearer to the Detroit/Windsor axis has probably diminished over the years with improvements in transport delivery times. The main need here is:

(iv) a firm commitment of federal and provincial governments to ensure the location of plants in Manitoba to manufacture motor vehicle parts and accessories.

The objective for increased employment in bus and mobile home manufacture is fairly modest. No specific activity is stated, other than continued liaison with the industry to ensure that ongoing problems are addressed.

9. EMPLOYMENT SUMMARY

Table E8 consolidates the scenarios presented for the year 2000 for transport services and transport equipment; the figures for Canada are, of course, the same for all year 2000 scenarios.

Table E8: Summary of Manitoba Employment in Transportation

	1989	No progress 2000	Maintain % share 2000	Target 2000
Canada - thousands				
Transport services	469.1			488.0
Transport equipment	219.8			231.0
Total	688.9			719.0
Manitoba - thousands				
Transport services	28.5	24.9	27.9	28.8
Transport equipment	7.0	7.0	8.0	10.6
Total	35.5	31.9	35.9	39.4
Manitoba Share-%				
Transport services	6.1	5.1	5.7	5.9
Transport equipment	3.2	3.0	3.5	4.6
Total	5.2	4.4	5.0	5.5

In 1989 Manitoba accounted for 6.1% of Canadian employment in transport services. Even with attainment of the objectives specified, the target still shows a slight fall in this share to 5.9% by the year 2000. The problem is, of course, declining railway employment.

In the transport equipment manufacturing sector, Manitoba has currently 3.2% of Canadian employment. This may seem disappointing against Manitoba's 4.1% share of Canadian population and the province's much higher share of the transport service industries. The problem is that Manitoba is virtually shut out of the motor vehicle and the motor vehicle parts manufacturing industries. The target calls for an improvement in this share to 4.6% by the year 2000.

Considering transport services and transport equipment manufacturing together, Manitoba had 5.2% of Canadian employment in 1989. The target for the year 2000 is a share of 5.5%. This may seem to be a fairly modest increase. However, it means 3,900 jobs more than in 1989. These jobs are all part of the economic base of Manitoba - the products of transport equipment manufacturing are mainly sold out of province and Manitoba exports a substantial part of its transport services in air, highway and rail, to other parts of Canada. For every job in Manitoba which is part of the economic base, there are an additional 2.4 jobs in the service industries and this ratio is quite typical of developed economies with high standards of living. When the multiplier effect is felt from an increased employment of 3,900 jobs in the economic base, the total employment impact would be some 13,000 jobs.

10. TRANSPORT USERS

As indicated earlier, TIDAC requested that the UMTI research include extensive interviews with stakeholders in the transportation industry. In fulfilment of this requirement, UMTI conducted 40 face-to-face interviews with manufacturing firms throughout Manitoba; extensive interviews with representatives of elevator companies and marketing boards; visits to major mining companies; meetings with Regional Development Corporations; and contacts with labour unions. On passenger transport, the interviewing process was less extensive, but a number of public interest groups were contacted.

Historically, railway freight rates have been an important policy issue in the prairie provinces and this was still evident as recently as at the Western Economic Opportunities Conference of 1973. The present study therefore focused extensively on the concerns of freight shippers and receivers in Manitoba and the problems anticipated in the future. The interviewing process produced specific complaints on the part of several manufacturing firms, but the general conclusion was that transportation was now less of a concern to the goods producing industries of Manitoba than was the case fifteen years ago. For many product groups, transport costs do not represent a large proportion of the product selling price. Where the burden is great, for example on chemicals and concrete products, the explanation is mainly in the nature of the product.

For the bulk of Manitoba's manufacturing industry, truck transport is the most important mode and this includes both for-hire trucks and trucks owned by the manufacturer. Rail transport is used to a considerable extent for the shipment of finished consumer goods to Manitoba; it tends to be used more for inbound shipments of raw materials, especially metal products, than for outbound shipments of manufactured products from the province. Generally, shippers seem to be very satisfied with both rates and quality on trucking services, especially interprovincial movements. There were more complaints on rail service, but rail service is inherently less flexible than the highways. The outbound rail movement from Manitoba is dominated by grain, which provides over 70% of the tonnage. Rail rates for grain are, of course, determined by a mileage related scale specified by the National Transportation Agency.

In a review of an earlier draft of part of the present study, the Manitoba Department of Industry, Trade and Tourism indicated a general agreement with our then provisional conclusions on the quality of freight transport. The Department stated that "the system is operating efficiently and does not appear to be a major impediment in the operation and/or enhancement of our manufacturing sector". The Department of Highways and Transportation has also indicated a reduction in the number of freight rate complaints brought to its attention. This improved situation would seem to have occurred as a result of increased reliance on trucking by Manitoba manufacturers, heavy competition within the trucking industry, greater truck-rail competition, an increased recognition by the railways of their customer needs, and the greater regulatory redress open to shippers as a result of the 1987 National Transportation Act.

In the past, the Manitoba government has been very active in analysis of the overall freight rate structure faced by the province, the freight rates likely to be incurred by new manufacturing firms locating here, and the rates and general transport and logistical problems faced by existing manufacturers. In part, it is the success of these activities that has allowed the improvements of the last two decades. The transportation situation will continue to be fluid over the next few years with the closer integration of the U.S. and Canadian economies, increased competition from U.S. trucking companies, and problems of duopoly in both the air and rail modes. The present study calls for a continuation of the province's work in monitoring, problem resolution and counselling on logistical problems.

Passenger transport was examined in less depth and the comments in this summary are confined to air transport. The quality of air service between Winnipeg and other parts of Canada is highly rated by users and only minimal monitoring by the province is necessary over the next decade. In transborder services, closer integration of the U.S. and Canadian economies following the Canada-U.S. Trade Agreement may increase pressures for Winnipeg to become a spoke to the Minneapolis hub. On the other hand, increased north-south air passenger traffic volume could open up opportunities for new routes between Winnipeg and U.S. cities. Manitoba must also continue to press for a resumption of direct air services between Winnipeg and European cities. The Air Canada announcement of twice-weekly service between Winnipeg and London for the summer of 1990 is via Ottawa rather than by the polar route, but this is at least a step in the right direction.

Two ongoing concerns were raised in respect of air service within Manitoba. Complaints about high air fares were very frequent during the course of the UMTI interviews in the north. A detailed examination of fare structures in relation to costs is beyond the terms of reference of the present study and UMTI is unable to comment on the extent to which the complaints are justified. The 1987 National Transportation Act relies on competition rather than regulation to determine fare levels in transport modes, but it recognizes that air markets in the north are fragile and that reliance on competition alone may not be enough. Nevertheless, over the last three years, the regulatory body has tended to leave air services and air fares in the north to the operation of competitive market forces. It is a legal requirement that any formal complaint to the Agency has to be brought by northern residents rather than by the province. The complaints in respect of air fares in northern Manitoba were widespread; the province has already attempted to assist northern residents to ask for investigation of these fares by the National Transportation Agency and these efforts to act as a catalyst should continue.

The second concern was the level of air service to Brandon. A brief history of this service is given in the study; the short distance between Brandon and Winnipeg inhibits the provision of commuter air service while, on transcontinental travel, Brandon has suffered from being a spoke to the Winnipeg hub. From interviews with civic and business leaders in Brandon, inadequate air service appeared to be the major transportation concern there and the Brandon community leaders considered that this was a serious hindrance to economic development. Perhaps there is need for an in-depth examination of the extent to which Brandon's economic development is impeded by inadequate air services. However, corrective action could be difficult in view of extremely limited prospects for any subsidy assistance.

LIST OF RECOMMENDATIONS

1. General Recommendations

Chapter 2:

1. The federal government should:

(a) recognize that Manitoba's large commitment to railway transport, where employment is inevitably declining, implies a heavy burden and assist in establishing offsetting employment opportunities in other economic activities;

(b) develop strategies, in conjunction with the province, for a long-term viable role for the Port of Churchill, appreciating that, in addition to an export grain movement, this involves wider issues such as defence, sovereignty and northern development.

2. The provincial government should:

(a) ensure an attractive environment in Manitoba for the transport service sectors, with this relating to a variety of issues ranging from training to taxation;

(b) recognize that much of Manitoba's employment in transport is to service demand from elsewhere in Canada and that this outside demand contributes over 10,000 jobs to the province.

Chapter 10:

1. The federal government should:

(a) ensure that federal procurement expenditures have maximum impact on the development of the transport service and transport equipment manufacturing industries in Manitoba.

2. The provincial government should:

(a) bring provincial needs forcefully to the attention of the federal government so that procurement expenditures by all levels of government have the maximum impact on the transport service and transport equipment manufacturing industries of Manitoba;

(b) make sure that Manitoba is tax competitive with competing jurisdictions and, as soon as possible, eliminate the payroll tax.

2. Air Transport

Chapter 3:

The provincial government should:

(a) take action to make Manitoba a centre of excellence in the training of professionals and technicians for the air transport and aerospace manufacturing industries;

(b) ensure that, as the Boeing 727 is withdrawn from the Air Canada fleet, there will be a smooth transfer to A320 heavy maintenance at the Air Canada Winnipeg Overhaul Base and see whether it could be possible to locate any other Air Canada system wide functions in Manitoba;

(c) seek a greater Canadian Airlines International Limited presence in Winnipeg, with particular reference to an overhaul base;

(d) allow competition in the provision of telecommunication to minimize telecommunication costs incurred by the Gemini Airline Reservation System and reduce any danger of re-location south of the border where such costs are lower.

3. Highway Transport

Chapter 4:

1. The federal government should:

(a) ensure that federal taxes do not penalize the Canadian trucking industry vis-a-vis U.S. carriers, with specific reference to corporate taxation, depreciation allowances and fuel taxes;

(b) make a contribution for improvements to the National Highway System, which has recently been identified by the Roads and Transportation Association of Canada (RTAC) and adopted by the Council of Ministers Responsible for Transportation and Highway Safety;

(c) compensate the losers from the abandonment of grain dependent railway branchlines, including the road authorities whose costs are increased, in the same way as provisions are contained for other branchlines under section 175 of the National Transportation Act.

2. The provincial government should:

(a) recognize, within the budgetary constraints of the province, that the payroll tax is particularly resented and that this tax on headquarters operations of interprovincial motor carriers increases the cost of doing business in Manitoba;

(b) extend RTAC limits on weights and dimensions to other highways in the province, as roads and structures are upgraded;

(c) take a pro-active role to ensure that Manitoba's participation in the motor carrier industry is not adversely affected by the consolidation of carriers expected to result from deregulation;

(d) ensure adequate expenditures on highway maintenance and construction in Manitoba, continuing to give high priority to providing four lanes on Highway #75 between Winnipeg and the U.S. boundary;

(e) continue the Manitoba initiative of a joint provincial endeavour to obtain federal funding for the National Highway System;

(f) continue to press the federal government for compensation in respect of increased highway costs caused by branchline abandonment;

(g) develop a rationalization plan for the intraprovincial trucking industry.

3. The City of Winnipeg should:

(a) comply with the new RTAC standards on the main truck routes within the city.

4. Railway Transport

Chapter 5:

1. The federal government should:

(a) ensure that, if the Western Grain Transportation Act is changed to a "pay the producer" basis, amendments will also be created so that the competitive response of the railways will not be inhibited by such requirements as time delays in introducing reduced rates to meet competitive circumstances;

(b) examine the overall future of rail transportation in northern Manitoba, working with the provincial government and recognizing that CN may need direct subsidy assistance to continue operating this service.

2. The provincial government should:

(a) determine whether it is in the interests of the province to continue burdens on the railways in such areas as payroll tax, diesel fuel tax and increased property taxes on railway right-of-way;

(b) examine all opportunities to increase CP Rail's car and locomotive heavy overhaul activity in Winnipeg.

5. **Transport Equipment Manufacturing**

Chapter 6:

1. The federal government should:

(a) assist Manitoba to obtain a significant presence in the manufacture of automobile parts;

(b) ensure that the development of the aerospace industry in Manitoba is a prime objective of the Western Diversification Office and that the needs of this industry are adequately considered in the awarding of government defence contracts;

(c) assist the transport equipment industries to find new markets, specifically in the context of the Canada-U.S. Trade Agreement and the effects of "Buy America" policies.

2. The provincial government should:

(a) continue its attempts to achieve a significant Manitoba presence in automobile parts manufacturing;

(b) take action to make Manitoba a centre of excellence in the training of professionals and technicians for the air transport and aerospace manufacturing industries;

(c) work with the bus and recreational vehicle industries to ensure their continued growth in the province;

(d) continue an active lobbying role in respect of the awarding of government defence contracts, pursuing this at the present time as representing a partial offset to the employment losses of military bases now being closed in the province;

(e) maximize the local sourcing of supplies by establishments in the transport equipment industries.

6. Transport Users

Chapter 9:

1. The federal government should:

(a) continue its present studies through the National Transportation Agency to determine whether the WGTA rate scale discriminates against Manitoba shippers and eliminate such discrimination as may be found;

(b) ensure, through the monitoring process carried out by the National Transportation Agency, that the quality of rail transport is adequate to meet the needs of shippers and receivers in Manitoba;

(c) take action to ensure that regional development initiatives are not unduly hindered by inadequate air service to non-metropolitan centres such as Brandon;

(d) assist Manitoba to obtain improved overseas and transborder air services, as part of the continuing bilateral air service negotiations.

2. The provincial government should:

(a) continue its role in transportation policy analysis and its monitoring of the transportation industries;

(b) continue its programs of assisting Manitoba industries to improve logistics and transportation management;

(c) work with the railways to resolve problems raised by Manitoba manufacturing industries, recognizing that the rail mode is still the most important transport mode for one-fifth of Manitoba's manufacturing industries;

(d) encourage the communities of northern Manitoba to bring their complaints on air fares to the attention of the National Transportation Agency;

(e) continue to explore the potential for improved air services for Manitoba, particularly transborder services and direct flights between Winnipeg and Europe.

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MANITOBA TRANSPORTATION ACTION PLAN TO THE YEAR 2000

RESEARCH REPORT

By

John Heads

UNIVERSITY OF MANITOBA
TRANSPORT INSTITUTE

TRANSPORTATION INDUSTRY
DEVELOPMENT ADVISORY COMMITTEE

MANITOBA TRANSPORTATION ACTION PLAN

TO THE YEAR 2000

A REPORT TO THE TRANSPORTATION INDUSTRY DEVELOPMENT ADVISORY COMMITTEE

by

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January 1990

This project was commissioned by the Transportation Industry Development Advisory Committee, an independent committee advising the federal and provincial governments on transportation matters in Manitoba. The contents of the Action Plan reflect the opinions of the University of Manitoba Transport Institute. They are not to be construed as official policy of the Government of Canada or the Government of Manitoba.

MANITOBA TRANSPORTATION ACTION PLAN
TO THE YEAR 2000

RESEARCH REPORT

The summary of this research study is in a separate volume entitled "Executive Summary".

FOREWORD

The transportation industry is of special importance to the Province of Manitoba because of the industry's historic role as a major employer in the Province. It is essential that the employment opportunities offered by the industry over the decade of the 1990s be maintained and enhanced.

The 1980s have seen major changes to the transportation service industry. In addition to dynamic technological changes, the air and trucking modes were largely deregulated and regulation of the rail mode has been significantly altered. These changes have had an effect on the structure of the industry, and change in the future will be more rapid than in the past.

Similarly, the transportation equipment manufacturing industry has been the subject of technological innovation. In addition, the Canada/U.S. Free Trade Agreement and other world-wide changes that will affect trading patterns will render the marketplace for this industry even more challenging in the future than in the past.

While there are inherent economic advantages for the transportation industry in Manitoba, governments must continue to be mindful of the impact of their policies on the decisions made by the industry to locate, relocate or shift portions of operations into or out of the Province. This is especially important in Manitoba because of our heavy reliance on the industry to provide employment opportunities for our population.

The Transportation Action Plan to the Year 2000 is an independent study prepared by the University of Manitoba Transport Institute for the Transportation Industry Development Advisory Committee. The study systematically reviews the state of the transportation industry in Manitoba and identifies the foreseeable changes that will likely occur. The study is based on extensive research performed and information collected by the Transport Institute. The study sets forth targets for employment in each segment of the industry for the forthcoming decade and, based upon a comprehensive analysis, recommends the steps that should be taken by governments to achieve the targets.

Canada competes for industrial development with the United States and other countries. Manitoba competes with other Provinces. The study reminds us that we, in Manitoba, cannot be complacent. The federal and provincial governments must take initiatives and formulate policies that will cause the transportation industry to consider Canada and Manitoba attractive for growth and expansion. As we move foreword into the 1990s, the Action Plan should act as a guideline for these governments to achieve the objectives that must be met. Our population requires nothing less.

Marshall E. Rothstein, Q.C.
Chairman, Transportation Industry
Development Advisory Committee

ACKNOWLEDGEMENTS

In commissioning the present study, the Transportation Industry Development Advisory Committee (TIDAC) asked that the University of Manitoba Transport Institute (UMTI) consult extensively with the stakeholders in the transportation industries. Every effort has been made to carry out this request; Appendix 2 of the Research Report names the persons and organizations consulted. This is a formidable list of transport carriers, transport equipment manufacturers and transport labour unions; transport users in the manufacturing, mining and agricultural sectors; public interest groups; Regional Development Corporations; and representatives of governments.

UMTI is very appreciative of all the assistance received from the persons and organizations consulted in the study. Without their generous input of time and knowledge, it would not have been possible to have undertaken this work. It is heartening to see how generously Manitobans respond to transportation development studies of this type. Every effort has been made to ensure that the views expressed have been represented fully and accurately in this report; however, UMTI takes full responsibility for any errors and omissions.

With such a lengthy list of people consulted in the present study, it may seem invidious to single out those who have made particularly large contributions. However, it would also be ungrateful not to do so. I start with acknowledgement of the generous help and assistance received from the Co-Managers of the Federal-Provincial Transportation Sub-Agreement and their staffs, who provided excellent factual and critical input into the study. On the provincial side, I would acknowledge Co-Manager Jim Wallace, Executive Director, Transportation Policy, Programs and Research, Manitoba Department of Highways and Transportation and his staff members, especially Jack Craven, Wes Graham, Roly Savoie and Dennis Schaefer. I would also thank the Manitoba Department of Industry, Trade and Tourism and specifically Bob Jack, Barry Mitchell, and Mike Wallace for their generous assistance. On the federal side, my thanks go to former Co-Manager Sandra Stoddart, Regional Director, Policy and Coordination, Transport Canada, and her successor, Gordon MacMichael. Statistics Canada has also been very helpful, both in the regional office in Winnipeg and in national headquarters.

The members of TIDAC have played a very important part in this study and I am appreciative of the valuable inputs received. Together with TIDAC Chairman, Marshall Rothstein, the names of the members are listed in Appendix 2, but they need to be recognized here. They are John Fehr, Reg Forbes, Ron Johnson, Rolly Painchaud, Ross Smith, and former TIDAC members Jim Campbell and Al Cerilli. I am particularly indebted to TIDAC Executive Secretary Don McCarthy, who has been a tower of strength throughout the study, well-organized, good-humoured and perceptive.

Finally, I wish to thank colleagues and consultants who have made major contributions to this work. These are named in alphabetical order: Murray Auld for assistance on aircraft manufacturing in Chapter 6; Norm Cameron for economic analysis contained in Chapters 1 and 11; Paul Earl for the contribution on quality of life in Chapter 1; Otto Lang, Chairman of UMTI, for continuous support; Ted Poyser for work on earlier planning exercises in Chapter 1 and on the Canada-United States Trade Agreement in Chapter 14; Betty Smith for expertise, patience and dedication in typing the whole report; Stan Spak, for conducting many interviews himself, accompanying me on many others and summarizing interview data in respect of most of Chapters 4, 7, 8 and 9; Vic Stechishin for technical input to Chapters 7 and 8; Ed Tyrchniewicz, formerly Director of UMTI, who planned the study and negotiated the research contract; and Stan Wallace, who conducted the research on technological developments and wrote Chapter 13.

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CHAPTER 1: THE MANITOBA ECONOMY

This study of Manitoba transportation to the year 2000 starts with a review of the Manitoba economy. Leading economic indicators are described in section 1 and the industrial structure is examined in section 2 with reference to the contributions made by the transport service and the transport equipment manufacturing industries. Section 3 summarizes attempts to forecast and manage change in the Manitoba economy over the last twenty-five years, commenting on both the success and lack of success of such efforts.

It is now ten years to the year 2000; section 4 lists some of the major changes in transport over the last decade, in an attempt to give some indication of the pace of change, which is simultaneously both faster and slower than one might have expected and much less predictable. The chapter closes in section 5 with a summary and a brief guide to the areas to be covered in the study.

1.1 LEADING ECONOMIC INDICATORS OF THE MANITOBA ECONOMY

In economic terms, Manitoba has progressed less rapidly than Canada as a whole since the beginning of the 1930s. Before the Second World War, concern was concentrated on the distressed state of agriculture in the "dirty thirties" and this was followed by preoccupation with the war effort. Shortly after the war, it began to become clear that the slower rate of growth in Manitoba was not a temporary phenomenon and since the 1950s there has been a general recognition of this problem.

Population increase has been less in Manitoba than in Canada; employment opportunities have grown less rapidly; wages and salaries and personal income per head are below the national average. However, the extent to which Manitoba has lagged behind Canada in terms of growth has never been sufficiently great to be burdensome. On the positive side, the unemployment rate in the province has, at least until 1988, been less than the national figure. Manitobans have always been willing to migrate - hence, in part, the low unemployment rate - and have been very successful elsewhere in Canada and in the United States. For example, in the context of the present transportation study, it is well known that Manitobans have been very well represented in the top echelons of both major Canadian railways.

More importantly, in terms of non-alarmist acceptance of a low growth pattern, Manitoba has never been alone in this situation. Since the Second World War, the main areas of growth in Canada have been the provinces of Ontario, British Columbia and Alberta. In terms of economic growth and income levels, Manitoba has fared as well as or better than Quebec and Saskatchewan. The four Atlantic Provinces - Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland - are, of course, far behind Manitoba in terms of economic prosperity.

A major problem in creating employment growth in the Manitoba economy has been the decline in employment in agriculture, at first in relative terms and subsequently in absolute numbers. This may not have been any greater in percentage terms in Manitoba than elsewhere in Canada, but the relatively high proportion of employment in agriculture has meant that the province has had a larger problem in offsetting declining agricultural employment than, say, Ontario or British Columbia. This difficulty has been even more acute in Saskatchewan and explains the population stagnation in that province for several decades; Alberta would have followed the same path, but was saved by petroleum developments. To anticipate the findings of a later chapter in this study, Manitoba has a problem similar to that of agricultural employment in the railway industry - employment in railways is declining rapidly across Canada and Manitoba suffers from its historic heavy reliance on railway employment.

While few would quarrel with the description of the Manitoba economy offered so far in this section, this is generalized and does not contain statistical support. Leading economic indicators for the province are now reviewed in quantitative terms, drawing mainly on the various publications of Statistics Canada.

1.1.1 Population, Employment and Unemployment

The population of Manitoba is estimated at 1,084,200 as of June 1, 1989. This is roughly comparable to Saskatchewan on the one side, but of course far smaller than Ontario on the other. Manitoba population growth has been slower than for Canada as a whole since the beginning of the 1930s. Looking at the post war period, 1951-89, the annual population growth rate in Manitoba was 0.88% per annum against 1.66% for Canada as a whole. Natural increase of population, namely the excess of births over deaths, is not much different in Manitoba from the rest of Canada and the low rate of population increase since the Second World War reflects a loss of population by net migration from the province.

With the vast reduction in the Canadian birth rate starting some twenty years ago, population growth in Canada has fallen substantially in the 1980s. Manitoba continued to lag, but this has been less marked. For the years 1981-89, the annual rate of population increase in Manitoba was 0.69% per annum as against 0.93% for the country as a whole. By June 1, 1989, the Manitoba share of Canadian population had fallen to 4.1%.

In terms of the geographical distribution of population, Winnipeg dominates the province with 636,000 inhabitants on the latest available figure for June 1, 1988. This amounted to 59% of the provincial population in 1988, as against 57% in 1981, although there had been an extension in the city boundaries between these years. The influence of Winnipeg in terms of daily employment stretches considerably beyond the city limits and it has been estimated that some two-thirds of the population of the province live within daily commuting distance of the capital. For the province as a whole, 72.1% of the 1987 population is defined by Statistics Canada as living in urban centres, each of population exceeding 1,000. With the pre-eminence of Winnipeg, it is not surprising to find that this is only slightly below the figure of 76.5% for Canada as a whole.

Population increase is not even across Manitoba. The general pattern since the Second World War has been population growth in Winnipeg and surrounding areas within commuting distance; population increase in northern Manitoba but fluctuating with resource development; and population decline elsewhere. Regional figures for 1982-89 are available from Manitoba Health Services Commission records. These show a 4.7% population increase for Manitoba in this period, which is roughly comparable to the Statistics Canada estimate of 4.9%.

On the basis of the Manitoba Health Services Commission figures, there was a population increase in Winnipeg of 6.1% in 1982-89. Of the other regions of Manitoba, only East-Man and the Interlake showed higher gains in population, 14.7% and 10.4%, respectively. The locations of these Regional Development Corporation areas are shown later in a map in Chapter 8; they are favourably placed to provide commuter traffic to Winnipeg. As a result of growth in the commuter fringes west of Winnipeg, Central Plains also showed a 4.5% population gain. Of the other Regional Development Corporation areas, population declined by 5.1% in the Parkland Region, centred on Dauphin, and by 0.8% in the Westman Region, centred on Brandon. Until the turnround in metal prices in 1988, the 1980s were not kind to the Manitoba mining industry and the Norman Region declined in population by 6.0%.

The age distribution of the Manitoba population does not differ much from that of Canada. A minor surprise is that in 1988 the age group of 65 and over contained 12.9% of Manitoba's population as against 11.1% for Canada. By the year 2000, it is estimated by Statistics Canada that 12.7% of the Canadian population will be aged 65 and over; the proportion in Manitoba could well be a little higher than this. The aging of the population will bring increased transportation needs for the aged, both handicapped and non-handicapped. Nevertheless, the increase in the population aged 65 and over will be fairly modest to the year 2000; fertility was low in the 1930s and this reduces the numbers of retirees. The World War II baby boom will not have a major effect on the number of retired before the turn of the century.

Employment in Manitoba has grown less rapidly than in Canada as a whole, paralleling the experience on population. In the period 1971-88, non-agricultural employment in Manitoba increased by 1.3% per annum against a figure of 2.0% for Canada. These percentage increases in employment are greater than those shown for population earlier in this section. This is mainly because of greater participation of women in the workforce. In addition, there is a larger proportion of population in the working age-groups, because a relative reduction in numbers of dependent children has more than offset the increased proportion of population in the age group 65 and over.

In 1975, 43.4% of the Manitoba female population aged 15 and over were active members of the workforce, as against 44.4% for Canada. Latest figures for July/September, 1989, show very substantial increases in female participation. The current Manitoba female participation rate at 58.9% compares with a male participation rate of 78.0%, a gap similar to that for Canada (57.9% for women versus 76.8% for men). Increased female employment has been a major socio-economic development in the last twenty years, but this cannot continue at such a rapid rate, because there are now far fewer non-working women available for enrolment in the workforce.

Unemployment rates in Manitoba and in all the Prairie Provinces have historically been 1% or more below the Canadian average. However, 1988 was atypical - the unemployment rate averaged 7.8% of the labour force in both Manitoba and Canada. On latest seasonally adjusted data for August/October, 1989, the unemployment rate was 7.2% in Manitoba and 7.4% in Canada. This latest Manitoba rate is much higher than Ontario

(4.9%); the same as Saskatchewan and Alberta (both at 7.2%); but very considerably less than in British Columbia (8.5%), Quebec (9.0%) and the Atlantic Region (Nova Scotia - 10.1%, New Brunswick - 12.4%, Prince Edward Island - 14.4% and Newfoundland - 16.3%). The current unemployment rate in Manitoba of 7.2% compares with 5.9% in 1981 and 5.7% in 1971. As for Canada as a whole, unemployment is now a more serious problem than in earlier decades following the Second World War.

1.1.2 **Personal Income, Average Weekly Earnings and Price Inflation**

Personal disposable income per head was $14,209 in Manitoba in 1988. The personal disposable income of Manitoba is the sum of income from employment, rent, investments, pensions and family allowance cheques, with the deduction of direct taxes, mainly income tax, and also Canada Pension Plan and Unemployment Insurance Payments. This figure is then divided by the total population of Manitoba to obtain personal disposable income per head.

Personal disposable income per head for Manitoba in 1988 was 6.4% less than the figure for Canada of $15,176. However, only Ontario, Alberta and British Columbia have personal disposable income per capita above the national average and the Manitoba figure compares quite favourably with Saskatchewan, Quebec and the Atlantic Region.

A Statistics Canada breakdown between the various regions of Manitoba for 1986 showed personal disposable income per capita in Winnipeg 11% above the provincial average. For the rest of the province, only the Westman area reached the overall provincial average. The lowest levels of personal disposable income per capita were in Norman and the Interlake.

Average weekly earnings have long been lower in Manitoba than in Canada as a whole. Latest figures for July/September 1989 showed Manitoba average weekly earnings at

$449.07 for the industrial composite of all activities other than agriculture, fishing and trapping, private household services, religious organizations and the military. This Manitoba figure was 8.5% below the average of $490.95 for Canada as a whole. Considering only manufacturing industry, Manitoba average weekly earnings were $478.00 in July/September, 1989, against a national figure of $571.39, with the shortfall much greater at 16.3%.

It has been argued that low average weekly earnings in Manitoba are partly due to the occupational mix of employment in Manitoba as against the country as a whole, with a relatively high proportion of low-paying jobs in the province. However, this is not generally regarded as a complete explanation and wage levels for comparable work are often lower in Manitoba than elsewhere. It is not the purpose of the present study to examine this matter further.

Brief comments need to be made on average weekly earnings in transport services and transport equipment manufacturing and these will be discussed in more detail in Chapter 2. The transport service complex in Manitoba had average weekly earnings of $602.09 in July/September, 1989, or 2.3% higher than the $588.75 for Canada as a whole. This reflects national bargaining for uniform wages across the country in many transport modes and the industrial composition of the transport services in Manitoba, where the rail industry with its high-paying jobs is particularly strongly represented.

The situation is less favourable in transport equipment manufacturing, where average weekly earnings in Manitoba in July/September, 1989 were $517.54, or 21% below the Canadian average of $657.19. As will be shown in Chapter 6, Manitoba rates of pay are generally lower in the individual sectors of transport equipment manufacturing. However, of greater importance, Manitoba suffers from a lack of high-paying jobs in the automobile manufacturing and automobile components and accessories sectors, which are both highly concentrated in Ontario.

Inflation rates in Canada are largely national phenomena, so these move roughly in parallel across all provinces. The Consumer Price Index for Winnipeg is calculated by Statistics Canada every month, but the calculation of an index for the province as a whole only commenced in 1986. Over the high inflation decade of 1973-1983, the Consumer Price Index for Canada increased at an average annual rate of 9.4% and this was also the rate of inflation for Winnipeg. With the more moderate inflation rates of recent years, the rise in the Canadian Consumer Price Index averaged 4.2% per annum in 1984-88, as against a Winnipeg annual inflation rate of 4.3%. On figures for January/November, 1989, the Canadian index was 5.0% above a year ago and the Winnipeg index showed an increase of 4.8%.

However, in spite of similar rates of inflation, there are significant differences in cost of living between Canadian cities and these have persisted over time. Statistics Canada compares components of the Consumer Price Index across eleven Canadian cities, i.e. Ottawa and the largest city in each of the ten provinces. The average price level for these cities is assigned an index of 100.0. The comparisons do not include all items contained in the Consumer Price Index and cover food purchased from stores, household operation, transportation, health and personal care, recreation, and tobacco and alcohol. These categories account for 60.5% of the total index, with each category weighted according to its level of importance in expenditure patterns. The missing expenditure categories are house ownership, rent and utilities (25.7%), clothing (8.7%) and food purchased from restaurants (5.1%).

On figures for September, 1989, the average price level for Winnipeg for these categories was 3.9% below the eleven city average; jointly with Edmonton, Winnipeg had the lowest figure of all the cities surveyed. Although Statistics Canada does not present data on the other expenditure categories in the consumer price index, the Winnipeg advantage would be considerable in the large category of house ownership, rent and utilities. This lower cost of living does much to offset the lower average weekly earnings in Manitoba.

A sophisticated examination of geographical differentials in the cost of living would also cover other factors not measurable in terms of the Consumer Price Index. Such consideration would include, for example, low commuting costs in going to work in Winnipeg as against Toronto and high costs imposed on Winnipeg residents by severe winters in respect of heating and winter clothing. However, further examination of this is beyond the scope of the present study.

1.1.3 Tax Rates and Burdens

The taxation issue is addressed in the context of the transport industries later in Chapter 10. The present section presents a brief summary of the current taxation position in Manitoba, compared with Ontario, Saskatchewan, Alberta and British Columbia. (The increase of one percentage point in Ontario's personal income tax, which becomes effective January 1, 1990, is included below.)

Table 1.1: Comparison of Provincial Tax Rates - 1989

	Man.	Ont.	Sask.	Alta.	B . C .
Income - personal (% of federal rates)	52	53	50	46.5	51.5
- personal income surtaxes	yes	yes	yes	yes	no
- net income (%)	2	no	2	0.5	no
Income - corporations general rate (%)	17	15.5	15	15	14
General tax on paid-up corporate capital	0.3	0.3	0.5	0	0
Mining (% of profit)	20	20	12.5	0	12.5
Retail sales (%)	7	8	7	0	6
Unleaded gasoline (¢/litre)	9	11.3	10	5	7.7
Diesel fuel (¢/litre)	9.9	10.9	10	5	8.1
Tobacco (¢/cigarette)	6.5	3.8	6.7	4.8	5.0

Source: UMTI and Manitoba Department of Finance.

In general, Manitoba's tax rates are relatively high. The provincial tax base is poorer than the Canadian average, so tax rates must be higher to provide the same level of per capita benefits as elsewhere. Equalization payments by the federal government make up for some of the shortfall in the Manitoba tax base, but not for all of it. Increasingly, the province has acted to broaden the tax base rather than increase already existing tax rates. Corporation capital taxes and payroll taxes are two examples.

In theory, this broadening of tax revenues is desirable from an efficiency standpoint, since the distortions caused by tax rates rise at an increasing rate with the tax rate itself; consequently, total distortion is lowered by diversification among many different taxes, other things being equal. However, as will be shown later in Chapter 10, there has been particularly strong resentment in the transportation industry in respect of payroll taxes and the diesel fuel tax levied on the railways.

The debt ratio of a province is defined as net tax-supported debt expressed as a percentage of gross provincial domestic product. In other words, the debt load is compared with the annual income level available. A high debt ratio adversely affects the province's credit rating and the ability of the government to manoeuvre in response to future shocks to the economy.

In 1988/89 the debt ratio for Manitoba was 24.2%, but this is now estimated at 21.7% for the 1989/90 fiscal year. Compared with other provinces, Manitoba could be regarded as average. Debt ratios are lower in Alberta, British Columbia and Ontario; roughly the same in New Brunswick and Saskatchewan; and higher in Quebec, Nova Scotia and Newfoundland.

The debt ratio is reflected in the provincial credit rating. The Standard and Poor Credit Rating as of January, 1990, was A+ for Manitoba. This was the same as for New

Brunswick and Saskatchewan, inferior to Alberta, British Columbia and Ontario, but better than for Quebec, Nova Scotia and Newfoundland.

1.1.4 Quality of Life

Economic considerations are not the sum total of the quality of life in different environments. In describing the attractions of life in Manitoba, promotional material issued by provincial and municipal governments has, quite rightly, never been confined to economic considerations. Quality of life has been described in terms including environmental, cultural and recreational opportunities, which are regarded as essential components of a good life.

In the 1970s, sociologists became more ambitious in attempting to define quality of life and made quantitative attempts to measure this elusive concept. Pioneer work in Canada was carried out by the now-disbanded Ministry of State for Urban Affairs (MSUA). The first publication, entitled "Urban Indicators: Statistical Profiles of Quality of Life for Canadian Cities", was released in 1978 and consisted of statistical measurement of various aspects of quality of life. The second publication was based on respondent interviews. The work was carried out by the Institute for Behaviourial Research of York University, under MSUA funding. The report was authored by T. Atkinson under the title "A Study of Urban Concerns", published in 1979 and revised in 1982.

Unfortunately, the measurement of quality of life contains many subjective factors and this may explain reduced interest in the subject since the early 1980s. Firstly, it is very difficult to determine the relative values of unlike elements which affect the quality of life. For example, how does one trade off the value of better theatre performances in one community against better urban transportation facilities in another? Secondly, attributes may be differently valued by different people, even when all are agreed that an attribute is beneficial or not beneficial. For example, while there may be agreement in dislike of

Vancouver's rainy weather and Winnipeg's outbreaks of arctic air, one individual may be more sensitive to gloomy weather and another more sensitive to the cold. Thirdly, in measuring quality of life, there are disagreements as to what is intrinsically good. Is the divorce rate a negative indicator of the breakdown of the family or a positive indicator of freedom from unhappy marriages? Fourthly, an individual's evaluation of his quality of life depends not only on his perception of how he lives, but also on his expectations. The rich are not necessarily happier than the poor - but, if one is determined to be unhappy, it is generally more pleasant to be unhappy in comfort!

The first approach to the measurement of quality of life used by MSUA was based on a wide range of statistical series, such as education, crime, civic amenities and air quality. The research covered 22 cities and 36 statistical measures were used. (However, some of these measures were rejected in the UMTI examination of this work on the grounds of ambiguity or debatable relevance - rather hilariously, one of the rejects appeared to relate square footage of drinking establishments to population, a measure on which Winnipeg had an impressively high score.) Winnipeg performed well in terms of air quality and owner-occupancy of housing; slightly below average on education, hospital beds and criminal offenses; and quite poorly on housing quality and a high rate of illegitimate births. In general, the rating for Winnipeg for this study ranged between positions #14 to #16 in terms of overall quality of life among the 22 large urban centres in Canada.

In the second study carried out at York University, a questionnaire was given to residents of 23 Canadian cities - these were the largest urban centres in Canada, but the list also included Charlottetown, P.E.I. Respondents were asked a large number of questions with answers on a scale to indicate their level of satisfaction in respect of various aspects of quality of life in their city; how they felt their city compared with other cities; and what things they liked and disliked about their own city.

The results of this survey were analyzed in three different ways. Firstly, average rankings on the various satisfaction scales were calculated. The average ratings of Winnipeg residents for all attributes placed their city in rank #16 out of 23, as compared with the ratings which other residents placed on the cities in which they lived. The second method of interpreting the results was complex, attempting to combine all measures in the survey, and the methodology was not completely defined. Nevertheless, Winnipeg still ranked in position #16. The third comparison was based on the unprompted responses of respondents in naming positive and negative attributes of the city in which they lived. The ranking was based on the average number of positive attributes identified minus the average number of negative attributes. On this approach, Winnipeg ranked in position #14.

It is interesting to place this rating of Winnipeg in perspective with other cities. On the three methodologies used to interpret the results, St. Catherines, Ontario, Ottawa-Hull and Saskatoon made the top five on all three measures; Victoria and London, Ontario, qualified on two of the three measures. Turning to the bottom five cities, Saint John, New Brunswick, Regina and Windsor, Ontario qualified on all three methodological approaches. No other city made the bottom five on more than one measure.

Attempts to measure quality of life can never be definitive. However, it is useful to consider this sociological measure as well as hard economic data. Suppose that the cities of Canada are divided into four sections - the top quartile of the cities are those with the highest quality of life, the second quartile contains those with the next highest quality of life, the third quartile contains the next listing roughly from #12 to #17, and the fourth quartile contains the 25% of cities deemed to perform least well in terms of quality of life. From the MSUA research, Winnipeg would appear in the third quartile.

1.2 SOURCES OF GROSS PROVINCIAL PRODUCT

This section examines the sources of the gross provincial product of Manitoba, in comparison with the Prairie Provinces as a whole and with Canada. Basic data are given for 1988 in Table 1.2.

Table 1.2: Gross Domestic Product: Percentage Distribution - 1988

Sector	Canada	Manitoba	Prairies
Resources	12.6	13.2	29.9
Agriculture	2.6	5.8	6.1
Forestry, Fishing and Trapping	1.0	0.3	0.3
Mining	6.0	3.8	20.9
Utilities	3.0	3.2	2.6
Manufacturing	19.8	10.3	6.5
Construction	7.0	6.8	7.0
Total Goods	39.4	30.2	43.4
Transport, Storage, Communications	8.1	13.3	10.8
Trade	12.1	13.4	11.2
Finance, Insurance, Real Estate	14.8	17.3	13.3
Community, Business and Personal Services	19.6	18.4	15.6
Public Administration	6.0	7.4	5.7
Total Services	60.6	69.8	56.6
All Sectors	100.0	100.0	100.0

Source: Conference Board of Canada.

Compared with Canada and the Prairie Provinces as a whole, Manitoba derives considerably less of its gross domestic product from the goods producing industries. In relation to the Prairie Provinces, this reflects the much greater importance of agriculture and mining in Saskatchewan and of the petroleum industry in Alberta. Manufacturing contributes much more to the Manitoba economy than to the other Prairie Provinces.

Manitoba has greater reliance on the service sector of the economy than Canada and the other Prairie Provinces. From all service producing activities, with the exception of community, business and personal services, Manitoba derives a greater percentage of its gross domestic product than Canada as a whole. Although no longer the gateway to the west of former times, Winnipeg is still a net exporter of services to the rest of the Prairie Region. This even extends to public administration, where Manitoba has a substantial proportion of federal employment in the Prairie Region.

As a broad unsophisticated explanation of economic base theory, economic activity in an area can be divided into basic output, which must occur there because of geographical reasons, and secondary activity which results from servicing the needs of the basic industries. This distinction is reasonably clear conceptually, but often difficult to measure.

From the standpoint of Canada, the economic base is defined as the production of agriculture, other primary resources and manufacturing. These accounted for 29.4% of Canadian gross domestic product. Construction is excluded from the base, although it is a goods producing industry, because construction serves the consumer and producer needs of the rest of the economy. Utility outputs are mainly consumed in direct consumption and the production of other goods and, in spite of hydro exports, this is not considered as a basic industry in the present crude approach. The export earnings of the tourist industry are also excluded.

Given a 29.4% share of Canadian gross domestic product attributable to basic industries, the remaining 70.6% of economic activity is generated by secondary activities. The workers in the basic industries spend money on transport, retail distribution, insurance, theatres, dentists, schools, civil servants and so on and this generates employment. In their turn, the people working in secondary industries also spend money, the recipients of this money spend again and so the multiplier process goes on. However, without the basic employment there would be no economic activity in the area.

For Canada as a whole, the multiplier is defined as total economic activity (100.0) divided by basic economic activity (29.4%), which gives a figure of 3.40. Every dollar spent on basic activities generate a total of $3.40 in economic activity, of which $2.40 is in secondary activities.

Turning to Manitoba, the basic economic activity derived from agriculture, other primary resources and manufacturing amounts to only 20.2% of gross domestic product. For Canada as a whole, all services have been defined as secondary activities, but this does not apply to Manitoba, which is a net exporter of services to the other Prairie Provinces. The excess service component in Manitoba vis-a-vis Canada (69.8%-60.6%=9.2%) is defined as basic for Manitoba. Adding this to the 20.2% from agriculture, other primary resources and manufacturing, 29.4% of the Manitoba gross domestic product comes from basic activities. The multiplier for Manitoba is therefore 3.40 and this is identical to the figure already established for Canada. (This identity does not arise purely by definition; the combined share of gross domestic product from utilities and construction happens to be the same in Manitoba and Canada. The economic base multiplier of 3.40 is vastly higher than the impact multipliers produced in input-output analysis; however, the two types of multiplier are conceptually different and input-output multipliers are not relevant to the examination here.)

Because of definitional changes, there are problems in taking Table 1.2 back in time. However, the general pattern of change is well established as a declining proportion of gross provincial product coming from the goods producing sectors and an increasing proportion of activity generated in the service producing sectors. This is typical of economic development with rising standards of living and has been well documented for over fifty years for a time period stretching back some two centuries. Returning to Manitoba, figures compiled by the Manitoba Bureau of Statistics showed the goods producing sectors accounting for 33.1% of Manitoba's gross domestic product in the second half of the 1970s and their estimate for 1988 is even lower than that quoted in Table 1.2.

It had been the intention to supplement this examination of gross provincial product with an historic analysis of employment by industrial sector. After considerable preliminary work, this intention was abandoned. There were major changes in the basis for collection of employment statistics in Canada; data published on a routine basis exclude agriculture and some other sectors of the economy; and there was a major problem in reconciling some of the Manitoba employment figures with the data contained in Table 1.2. These problems are not insuperable, but solutions would be time-consuming and would not represent an integral part of the present study. A separate employment multiplier has therefore not been calculated.

1.3 EARLIER PLANNING EXERCISES IN THE MANITOBA ECONOMY

The present study is charged with the analysis of the current transportation scene in Manitoba; the assessment of developments likely to take place over the next decade; the forecast of likely outcomes to the year 2000; and identification of action that might be taken to increase Manitoba's share of national transportation activity. To the best of our knowledge, this is the first time that research has been commissioned to take a forward look at transportation in the province in this way. However, it is by no means the first time that transportation has been addressed within the context of an overall planning mechanism for the province. It is useful to review briefly these earlier exercises in planning.

Towards the early 1960s, economic planning was very much in vogue in Canada and throughout the western world. The Economic Council of Canada was established at that time together with similar organizations in many provinces including Manitoba. In 1963 a major economic development project was published under the title of "Report of the

Committee on Manitoba's Economic Future", commonly known as the COMEF report. The objective of this study was to promote growth and development of the economy of Manitoba and transportation was identified as an important sector. Specifically, transportation was targeted with a 50% growth in employment between 1962 and 1975. As we have seen from the sluggish rate of growth in transportation identified earlier in this chapter, this target was not in any way achieved. The specific recommendations of COMEF are quoted below in summary from the relevant parts of pages X-1-6 to X-1-8 of the report. Some of the recommendations have been implemented and some are still with us unimplemented today.

> Strong efforts must be made immediately to revitalize Winnipeg as a regional and international air transport service centre and to eliminate some of the existing gross deficiencies in both domestic and international air service patterns as they affect the Province.
>
> Greater Federal support is required for highway improvements, particularly for the Trans-Canada Highway and for north-south feeders within the Province.
>
> The Province should take immediate steps to participate fully and effectively in the rationalization of railways in the West.
>
> It is probable that the natural waterway afforded by Lake Winnipeg can be employed more effectively and fully. Support should be given to operators aggressively undertaking to develop the traffic potential of this route.
>
> While the important role of transportation in the development of the North should be explicitly recognized, it is important also to note that transportation facilities, by themselves, will not insure development.
>
> Federal policy with respect to air carriers serving the North should be critically re-examined to insure that they are consistent with the most effective use of available facilities and services.
>
> Although the Port of Churchill and the Hudson Bay Route necessarily are restricted to a limited role in view of the short shipping season, active programs should be directed toward maximum use of the available facilities.

The next attempt at large scale economic planning in Manitoba was entitled "Manitoba to 1980: Report of the Commission on Targets for Economic Development", released in 1969 and known as the TED Report. Some of the recommendations of the TED Report in the transportation area are listed below, but they are general in nature rather than presenting a plan of action. Transportation was not in the original terms of reference for TED and the report recognized that it had only made "a quick appraisal". Relevant quotations from Chapter 5.5 of the report are as follows:

> As a fundamental policy, therefore, the aviation industry in Manitoba should develop with the following targets in mind:
>
> - A level of passenger and cargo air service - overseas, transcontinental, regional, third-level, and charter -which will not only serve the Manitoba economy but will stimulate and accelerate its growth
>
> - Facilities and support services of all types appropriate to the level of aviation activity, particularly export services
>
> - A high level of aviation-based manufacturing
>
> - A similar high level of general aviation activity.
>
> There is reason to believe that the present transportation services in rural Manitoba are unsatisfactory in terms of variety, quality, and cost. To support long-term regional development strategy in the province, rural transportation presents more problems of coordination and development than any other element of the whole Manitoba economy.
>
> Very little is known about the way in which the existing regulation and control mechanism affects either the (trucking) industry, the Manitoba economy or specific businesses. If transportation is to play a more dynamic role in development, a complete investigation of the whole highway transportation structure, including all outstanding licences, is required.
>
> To respond effectively to the challenges and opportunities identified above, a programme of bold action is required. It is apparent there is a need in Manitoba for better transportation planning.

A third and final macro-economic planning study for the province was published in 1973 under the title of "Guidelines for the Seventies". Transportation had a more subservient role in this planning exercise and the transport references in the report were largely confined to recognizing that industrial development could be impeded by excessively high freight rates, that the rural transport system needed improvement in transport links between centres within rural Manitoba, that transport was essential to northern development, and that the use of the Port of Churchill needed to be encouraged.

In addition to these overall plans for transport, there was also the report of the Manitoba "Royal Commission Inquiry into Northern Transportation", released in 1969 and known as the Mauro Report. This was an examination of transport needs in Northern Manitoba, containing recommendations, many of which have subsequently been implemented. This was a specific study and a very useful examination of transport in the north, but it does not fall into the overall framework of the more general studies surveyed earlier in this section.

By the mid-1970s, large-scale economic planning was falling into disrepute throughout the western world and this was also evident in Manitoba. There was no attempt to repeat the overall planning exercises of COMEF, TED or Guidelines. The scene had changed from a preoccupation with planning to an emphasis on pragmatism. Since 1967, there had been a variety of federal-provincial agreements to develop various parts of Manitoba. Transportation was rarely the lead activity in these plans, but it frequently appeared in a subordinate role.

A comprehensive development plan was carried out in the Interlake region of Manitoba in the decade 1967-77. This was generally known as the FRED Plan and it included a road transportation program to improve transport within the region and to Winnipeg. Of the total of $85 million committed to this program, $8.8 million was used for highway improvements. A Special Area Agreement for The Pas was implemented in 1970-75.

Transport again appeared in the strategy and provincial roads absorbed $2.4 million out of a total commitment of $19 million.

A General Development Agreement between the federal and provincial governments was established for the period 1974-84 to identify priorities in Manitoba. These included building on the province's industrial base; diversifying agriculture; developing the north and reducing disparities between remote and urban communities there; and confirming Winnipeg's role as the major urban centre with adequate amenities for economic development. However, transportation was not specifically identified in this plan and in fact the use of transport to promote economic development was rather thin in this decade.

The 1974-84 Agreement was succeeded by the Canada-Manitoba Economic and Regional Development Agreement for 1984-94. Under the umbrella of this agreement, a subsidiary Churchill agreement was negotiated with a total commitment of $94 million, of which over half was designated for transportation infrastructure. A second subsidiary agreement related to transportation development. This included over $100 million of federal money for air infrastructure and minor inputs into a number of other transport developments; funding of the Transportation Industry Development Advisory Committee at a cost of $1.8 million; and construction of the Drake Centre at the University of Manitoba to lodge the Transport Institute and the Faculty of Management at a cost of $11.6 million. A third subsidiary agreement on Urban Bus Industry Development involved a commitment of $50 million, although very little was in fact spent. These three subsidiary agreements had a time duration of only five years; they lapsed on March 31, 1989 and have not been renewed.

To summarize the experience of Manitoba in planning for transport development, the process started off with a bang in the confident target of vastly increased employment specified by COMEF in 1963. Unfortunately, the report was light on practical means of achieving this laudable objective. Transport featured in the TED Report of 1969 and, much less prominently, in the Guidelines Report of 1973. Targets and plans had been rejected by this stage in favour of broad generalizations and injunctions to government. Large-scale planning then fell out of favour, not only in transportation but in virtually every area of economic activity throughout the western world. The Economic and Regional Development Agreement for 1984-94 considerably increased the scope for transport-related cooperation between the federal and provincial governments. However, the relevant subsidiary agreements were only for five years and have now lapsed, mainly as a result of federal budgetary restraint.

1.4 MAJOR TRANSPORT DEVELOPMENTS, 1979-89

It is not the intention to give a comprehensive listing of transport developments in the period 1979-89. Rather, the objective is to note some of the major changes in an attempt to illustrate the pace of change, which is always simultaneously both faster and slower than expected and much less predictable. The developments mentioned below are examined at greater length later in the study.

Reflecting over the past decade, perhaps three developments are most prominent. Firstly, there have been vast changes in the attitude of government to transport regulation. Secondly, although the last ten years have seen continuing improvements in transport productivity, there have been no quantum technological changes in any of the modes. Thirdly, the energy crisis moved away from centre stage early in the 1980s.

In 1979, the sunset provisions for the Civil Aeronautics Board in the United States had been announced to take effect in 1981, but most transport analysts failed to grasp either the seriousness or the importance of this declaration. By the beginning of the 1980s, there had been an almost complete deregulation of air, highway and rail transport in the United States and the speed with which this came about was remarkable and surprising.

In Canada, government started to give serious consideration to changing the statutory rail rates on grain only in 1982. This intention was given effect in the Western Grain Transportation Act, passed in 1983 and effective January 1, 1984. Under the winds of change emanating from the United States, air transport was effectively deregulated in southern Canada in 1984, although formal legislative confirmation of this did not come until the 1987 National Transportation Act. The railways in Canada had been largely deregulated in 1967, but freedom to engage in confidential contracts was allowed by the 1987 legislation, together with a number of other measures mainly aimed at shipper protection. Changes in legislation governing extra-provincial trucking meant that this industry is now on a phase-in to complete deregulation. Although most of this regulatory change was needed and had been debated since the early 1970s, the speed with which this would take place was not anticipated by most transport analysts a decade ago.

Faced with vast budget deficits, governments have also tried to turn their back on heavy subsidies to transport - however, until recently, there has been very little success in Canada, given the heavy subsidy costs of the Western Grain Transportation Act and of VIA Rail. Early in 1989, it became clear that the federal government had decided to take action to reduce drastically the large payments made to VIA and this is addressed later in Chapter 5.

On the other hand, the technological developments of the period 1978-88 have been more impressive by their absence than their presence. Admittedly, it is generally a delusion to look for technological change in terms of quantum leaps, rather than as steady and unspectacular progress. Productivity increases have continued to be achieved in the transport industries. Nevertheless, it is difficult to look at the technology of transport in 1989 and point out vast differences from the situation in 1979. Developments towards more efficient vehicles, especially in respect of fuel consumption, were seen in all modes and increased use of micro computers was also evident from private automobiles to the early steps in the development of Advanced Train Control on railway locomotives. The air transport mode has since its inception been more affected by technological change than the surface modes. The past decade saw implementation of Joint Enroute Terminal Systems (JETS) in air traffic control and the commencement of the Radar Modernization Program (RAMP). However, with the possible exception of the air mode, none of these changes constituted a quantum technological leap in so far as their implementation, as distinct from their development work, is concerned.

On infrastructure, the quality of railway track has improved considerably, but with technologies already established over a decade ago. In the highway mode, there have been inadequate expenditures on maintenance and improvements, as explained in Chapter 4, and the highway structure has deteriorated both in Canada and in the United States. The problems of urban transportation have become more acute and the word "gridlock" has become a common part of the vocabulary to describe the problems of traffic tie-ups in large urban centres. According to The Economist of February 18, 1989, the average speed of travel in city centres of the large metropolises of the world is rarely higher than 12 miles per hour, little better than the horse-drawn speeds enjoyed over one hundred years ago. While the problem may be less acute in Canada, Vancouver is the only city which has made a really imaginative approach to urban transport over the last decade.

In 1979, the energy crisis was only five years old and energy considerations were very prominent in the transport scene. The energy crisis flared up with a vengeance in 1979, but this has ceased to be so much of a problem in the 1980s, with more plentiful world production of oil and economies in utilization by the major consuming countries. Most transport analysts would not have expected the oil crisis to wane so quickly and to cease to be such a dominating influence on transport. As a result, transport has been more buoyant in the 1980s than expected and the economies of the western world have flourished since the 1982 recession. With relief from the oil crisis, the pressures to economize on fuel have eased and this may have been responsible in part for a reduced pace of technological progress in transport.

It is not necessary to continue at greater length on the unexpected changes which occurred in the period 1979-89. The unexpected will undoubtedly continue to occur in the decade that awaits us to the turn of the century. Specific developments are reviewed in Volume 2 of the present study, but great unknowns remain - the speed of technological change, energy supplies, the general buoyancy of the economy and government intervention in transport markets. Yet, even these important issues become secondary in the wider context of the two fundamental dangers of nuclear war and world population explosion. Planning and forecasting are always hazardous activities.

1.5 SUMMARY

In subsequent chapters of this study, the final section concludes with a summary, a consideration of prospects and concerns, and suggestions for action. This first chapter calls only for a summary, as the study is obviously not making recommendations for the economy as a whole.

1. In economic terms, Manitoba has progressed less rapidly than Canada in recent decades. Population increase has been slower and generally concentrated in Winnipeg. Employment creation has been less than for Canada as a whole, in spite of increased female participation in the labour force. Unemployment rates in Manitoba have been historically lower than for Canada; in 1988, the unemployment rates for Manitoba and Canada were identical at 7.8%, but latest data for 1989 shows the Manitoba rate again below the national average.

2. Wages and salaries are lower in Manitoba than in Canada. The shortfall in average weekly earnings is quite marked, with the Manitoba figure currently 8.5% below the Canadian average. However, this is partly offset by a lower cost of living. With transfer payments and investment income, personal income per head in Manitoba is 6.4% below the Canadian average. Tax rates generally tend to be somewhat higher than in other

provinces. The provincial debt ratio leads to a credit rating for Manitoba about the average for Canadian provinces.

3. An attempt has been made to review literature on "quality of life" for Winnipeg in comparison with other large urban centres in Canada - no data exist to allow this to be done for the province as a whole. Quality of life is a subjective concept as it includes consideration of a large number of non-economic aspects, ranging from cultural activities to quality of air. For what the comparisons are worth, Winnipeg never appears among the top five or the bottom five Canadian cities. On average, out of 22 to 23 cities, Winnipeg ranks in the range of #14 to #16.

4. In terms of gross domestic product, the goods producing sectors, excluding utilities and construction, provide 29.4% of Canadian output. In Manitoba, the figure is much lower than this at 20.2%. This is because Manitoba is also a net exporter of services to other parts of the Prairies. These service industries - such as transport, trade and financial services - to the extent that they are exported add a further 9.2% to Manitoba's basic output, for a total contribution of 29.4% from the goods producing sectors and the service export sectors.

5. Output in Manitoba from transport equipment manufacturing and, at the margin, from transport services is export oriented beyond the provincial boundaries and is part of the economic base of the province. Of Manitoba's gross provincial product, 29.4% is in the economic base and this generates the further 70.6% of output which is service related and emanates ultimately from the economic base itself. The ratio of total output (100.0%) to base activity (29.4%) gives a multiplier of 3.4. Interpreting this in terms of employment, for every job in the economic base, there is a total of 3.4 jobs through the multiplier effect, with 2.4 of these jobs in the service producing sectors of the economy.

6. Past attempts to forecast the role of transport in the Manitoba economy are reviewed. The great age of macro planning was as far back as the 1960s and the rather general nature of the recommendations is noted. Since the mid-1970s, planning fell out of favour in the western world; in accordance with this general philosophical change, Manitoba transport tended to be planned on an ad hoc basis, rather than as an overall approach. The Economic and Regional Development Agreement negotiated between the federal and provincial governments for the period 1984-94 opened up the possibility of a more planned approach. However, the subsidiary agreements relating to Churchill, transportation development and urban bus manufacture were only for five years; they have now lapsed and are not being renewed.

7. Major transport developments in the decade 1979-89 are enumerated, mainly to highlight the problems of forecasting and planning in a future which is always uncertain. In retrospect, this decade may not seem to have been a period of great change. Nevertheless, a transport analyst surveying the scene in 1979 would not have anticipated the extent of regulatory change in 1979-89; the reduced impact of energy concerns on transport from the early years of the 1980s; and, in spite of continued improvements in transport productivity, the slowness of technological change. Forecasts and plans for transport in the future are always liable to be wrecked by unforeseen change.

This section closes with a brief guide to the areas to be covered in the report, with the Table of Contents providing a more detailed account of the approach. After this initial chapter on the Manitoba economy, the study proceeds to the present state of the various transport modes and the transport equipment manufacturing industry in Manitoba. This is not a static examination, as problems are identified, prospects and concerns are considered and recommendations are made in each chapter. Transport users are then examined and this is followed by consideration of several transport policy issues which have not been addressed in earlier chapters. Again, prospects, concerns and recommendations are enumerated. The bulk of the results of the fact-finding transport research and the very extensive interviews with shippers, carriers and government representatives are reported in these chapters of Part 1.

In Part 2, examination is made of specific developments which have taken place recently, are in process, or can be anticipated over the next decade. The future of the Manitoba economy is reviewed and other chapters address regulatory change, technological developments in transport, and non-transport factors, namely the Free Trade Agreement, energy and environmental issues. The study then projects current trends in the transport modes and the transport equipment manufacturing industry to the year 2000 and identifies changes needed in order to maximize economic activity in Manitoba in transport services and transport equipment manufacturing.

Although an effort has been made to be specific, the study can only present the directions for action rather than detailed implementation plans. Both the federal and provincial governments have substantial civil service departments charged with transportation and economic development and they have the resources to make things happen. Nevertheless, it would be remiss not to recognize that the grindingly difficult part of development is not the planning but the implementation. While planning may be more prestigious, effective implementation is the real key to successful development.

CHAPTER 2: THE TRANSPORT SERVICE INDUSTRIES - OVERVIEW

The chapter starts with an overview of transport services and then, as a matter of convenience in presentation, it proceeds to the specific subject of the Port of Churchill. The final section is a general review of prospects and concerns relating to transport services in Manitoba. The air, highway and railway modes are only addressed briefly, as the three subsequent chapters deal with these transport services. The chapter does not cover transport equipment manufacturing, freight rates, quality of service and transport regulation, which are all considered in later chapters.

2.1 THE TRANSPORT SERVICE INDUSTRIES

The transport service industries consist of for-hire carriers who move people and goods within Canada and between Canada and abroad. The industry covers all for-hire activities relating to air transport and services incidental to this mode; highway transport by truck, household moving van and bus; railway transport; urban transit systems; highway and bridge maintenance; water transport and incidental services to this mode; and other transport and related services, including taxicab operation and pipeline transport. Transport services do not include private transport, particularly the economic activity generated by private motoring and by private trucking carried out by manufacturers and construction firms using their own vehicles.

The study accepts the definition of transport services used by Statistics Canada in the Standard Industrial Classification (codes 501-519). As already indicated, this excludes private automobiles and private trucking. In addition, employment in the taxicab industry probably excludes a number of part-time drivers. On the other hand, all overhaul and repair activities carried out in-house by carriers are classified as transport service activities, although some of this work verges on transport equipment manufacturing. Problems of definition arise in any statistical measurement and the Statistics Canada determination of this issue is accepted as reasonable.

The transport service industries are much larger than the transport equipment manufacturing industry. Figures for 1989 show employment in transport services across Canada at 469,000 or more than double the 220,000 employees in transport equipment manufacturing. In Manitoba, there were 28,500 employees in transport services against 7,000 employees in the manufacturing of transport equipment.

2.1.1 Transport Employment in Canada

Table 2.1 shows employment in transport services in Canada in 1989 and 1983. The 1989 figures actually relate to November 1988/October 1989, as these are the latest data available. The 1983 figures are for April 1983/March 1984. There was a major change in the coverage of the relevant statistical series effective April, 1983 and this would make it difficult to carry the table back to earlier years.

In 1989, transport services accounted for an employment of 469,100. This was equivalent to 4.5% of total Canadian employment of nearly 10.5 million across the aggregate of all industrial activities. (This industrial aggregate relates to employment in all economic activities in Canada except for agriculture, fishing and trapping, private household services, religious organizations and the military.)

Table 2.1: Employment in Transport Services - Canada

	1983 thousands	1989 thousands	% distribution 1989
Air transport (a)	50.8	63.9	13.6
Highway transport	104.0	121.1	25.8
Railway transport	95.7	73.5	15.7
Urban transit	35.0	38.3	8.2
Highway and bridge maintenance	63.7	56.4	12.0
Water transport (a)	29.1	26.9	5.7
Other transport and services	84.4	89.0	19.0
Total	462.7	469.1	100.0

(a) Including incidental services.

Source: SC 72-002. Figures for 1989 are latest available annual data, i.e. November 1988/October 1989. Figures for 1983 are for April 1983/March 1984 to avoid a major revision to this statistical series. There was also a further revision effective January, 1987, for which Statistics Canada has supplied adjustment factors. These have been applied in the table above to the figures actually published for April 1983/March 1984.

Highway transport is the most important mode in respect of employment, accounting for 25.8% of total Canadian transport employment in 1989. The bulk of this employment was in the for-hire trucking industry, with 8,200 jobs in the household moving and storage business and 3,500 jobs in interurban and rural bus transport. Railway transport ranked in second place with 15.7% of 1989 employment. Air transport was in third place with 13.6%. Highway and bridge maintenance provided 12.0% of employment in transport services. This does not include the construction of highways, bridges and streets (assigned by Statistics Canada to the Construction Code 406) which provided an average of 41,500 jobs in 1989, but subject, of course, to very marked seasonal fluctuations. Urban transit provided 8.2% of the employment in transport services and water transport 5.7%.

The miscellaneous sector of other transport and related services provided a surprisingly large 89,000 jobs. Of these, 8,100 were in pipeline transport and 10,500 in the taxicab business. Groups labelled "miscellaneous services incidental to transport" and "other transportation" each accounted for some 35,000 employees. The miscellaneous services group covers a multitude of activities ranging from pool car operations to stockyards, but the bulk of the employment seems to be with travel agents and in parking lot operations. Other transportation is also very varied, ranging from airport limousine drivers to operators of horse-drawn vehicles, but the main employment would seem to be in school buses and ambulance services.

Comparing 1983 and 1989, transport employment showed only a 1.4% increase. Revisions to the relevant statistical source make it extremely difficult to plot transport employment over a longer time period, but there has been no strong growth in recent years. The transport share of employment in the composite industrial structure covered by SC 72-002 fell by over one percentage point between 1971 and 1981. Although there was some increase in absolute numbers employed in transport in the 1980s, this may have been due more to statistical revisions than to real growth.

Examining the individual sectors in 1983-89, the growth in air transport was appreciable and this has been the most rapidly growing transport mode for decades. There has also been a very substantial increase in employment in highway transport. However, this may be slightly exaggerated in the table, if Statistics Canada were not completely successful in adjusting the 1983 figures for the statistical reclassification of the trucking activities of the railways. Urban transit employment has also increased and this is to be expected in view of increased provincial and municipal expenditures throughout Canada.

Railway employment has been declining rapidly in Canada for many decades. Employment in highway and bridge maintenance has also fallen appreciably and this reflects reduced expenditures on highway construction and maintenance, reviewed later in Chapter 4.

Water transport is offering fewer jobs than five years ago and this is a continuation of a long-term trend.

As indicated earlier, the air, highway and railway transport modes will be addressed in subsequent chapters. It is not the intention to consider urban transit further in this study. Transit employment is a function of the size of urban areas and responds to growth, rather than being an agent of growth in itself. Water transport is addressed only in the context of the Port of Churchill, which forms the last part of the present chapter. No further attention will be given to other transport and associated services. Ambulance services, taxis, parking lots and horse-drawn vehicles are not really within the terms of reference. If time had allowed, there might have been value in addressing the travel agent sector, particularly the wholesaling part of this business, which already generates some revenues from out of province.

2.1.2 Transport Employment in Manitoba

Before discussing transport employment in Manitoba, it is advisable to comment on the quality of the data. For Manitoba, Statistics Canada publishes only total employment in transport services and the figure for air transport. However, Statistics Canada has provided unpublished data for other sub-components, where these figures are not confidential. The only major sector suppressed for reasons of confidentiality is rail transport; the rail figures shown below were compiled as a result of UMTI visits to the carriers and are reasonably accurate.

In respect of highway transport, the figure covers only trucking employees domiciled in Manitoba. Employees of trucking companies headquartered in Manitoba but domiciled out of province are excluded. Broker operators are not considered as employees of trucking companies, regardless of where they are located, and it is only recently that Statistics Canada commenced compilation of numbers of broker operators. Statistics

Canada Bulletin 50-002 for October 1988/March 1989 showed 1,700 broker operators in Manitoba, as against 19,000 for Canada as a whole.

Table 2.2: Employment in Transport Services - Manitoba

	1983 thousand	1989 thousand	Manitoba as a % of Canada 1989
Air transport (a)	3.0	3.6	5.6
Highway transport	6.5	7.9	6.5
Railway transport	12.4	9.7	13.2
Urban transit	1.3	1.4	3.7
Highway and bridge maintenance	3.5	3.4	6.0
Other transport and services (b)	2.4	2.5	2.2
Total	29.1	28.5	6.1

(a) Including incidental services.
(b) Including water.

Source: SC 72-002 and UMTI estimates. Figures for 1989 are latest available annual data, i.e. November 1988/October 1989. Figures for 1983 are for April 1983/ March 1984 to avoid a major revision to this statistical series. There was also a further revision effective January, 1987, for which Statistics Canada has supplied adjustment factors specific to Manitoba. The adjustment factors have been applied to the figures actually published for April 1983/March 1984.

In 1989, Manitoba had 6.1% of total Canadian employment in transport services. This is appreciably higher than the 4.1% share of Canadian population and reflects Winnipeg's historic role as the transportation centre of western Canada. It is in the rail mode where Manitoba's share of Canadian employment is at its highest. For Canada as a whole, it was shown in Table 2.1 that railway transport provided 15.7% of total employment in the transport service industries. A similar calculation for Manitoba for 1989 shows that the rail mode provided 34% of employment in transport services. This heavy reliance on rail transport is a problem in terms of future employment prospects. Employment in rail transport has been declining rapidly for several decades and, as will be explained in Chapter 5, this is certain to continue.

In the air and highway transport modes, Manitoba also enjoys shares of Canadian employment appreciably higher than its share of population. These modes are addressed further in Chapters 3 and 4. Given the low density of population in Manitoba, employment in highway and bridge maintenance is relatively high at 3,400. In addition, Manitoba employment in the construction of highways, bridges and streets (shown in Statistics Canada Code 406) averaged 1,300 in 1989, but subject to very marked seasonal fluctuation.

Employment in urban transit provides some 1,400 jobs in Manitoba. Employment is mainly dependent on the size of Winnipeg, as the only other cities providing transit services are Brandon, Thompson and Flin Flon. Other transport and associated services are also focused primarily on local demand. The Manitoba share of this employment is small according to Table 2.2; Manitoba has very little employment in water transport and, in addition, the small-scale activity of many enterprises in this category increases the statistical danger of under-reporting. Urban transit and other transport and associated services are not discussed further in the present report.

Manitoba provides employment in the three major transport modes considerably in excess of its share of Canadian population. This additional employment represents part of the economic base of the province which is generating exports beyond provincial boundaries to other parts of Canada. The sources of this export employment will be examined at considerable length in the next three chapters and are enumerated only briefly here as - Air Canada's finance administration and overhaul activities; the heavy concentration of rail activities in Winnipeg, particularly in respect of car and locomotive repairs; and Winnipeg's role as national headquarters of nine of the thirteen largest interprovincial motor carriers in Canada.

The extent of the export employment generated is examined more precisely in subsequent chapters. A rough estimate can be made at this early stage in the study, by subtracting from Manitoba's share of employment the province's 4.1% share of Canadian population. For air, the calculation is 5.6% - 4.1% = 1.5%, which is applied to total Canadian air employment of 63,900 in 1989 to give an export employment of 1,000. The comparable figure for highway transport is 2,900 and for rail transport 6,700. The total addition to the economic base of Manitoba from the export component of the transport service industries was therefore some 10,600 jobs in 1989.

For Canada as a whole, Table 2.1 showed that employment in transport services increased by only 1.4% in the 1983-89 period. In Manitoba, transport employment fell by 600 jobs in this period, which is a decline of 2%. The problem is caused by Manitoba's heavy dependence on rail transport. In relation to its population, Manitoba has three times as many railway workers as Canada as a whole and is therefore particularly susceptible to the decline of this industry.

2.1.3 Average Weekly Earnings in Transport Services

Table 2.3 shows average weekly earnings in the various transport services for Canada and Manitoba. The latest data are for July/September 1989; these three months have been averaged to avoid random variations, although this is not usually a major problem with this statistical series.

For Canada as a whole, average weekly earnings in July/September, 1989 were $588.75 in transport services. This was appreciably higher than for the industrial aggregate of all forms of employment. Of the major areas of transport employment, the rail mode showed the highest level of average weekly earnings. This was exceeded only in two sectors where employment was small, namely pipeline transport and services incidental to water transport, which are not shown separately in the table.

Table 2.3: Average Weekly Earnings - July/September, 1989

	Canada $	Manitoba $
Air transport (a)	683.68	681.84
Truck transport (b)	535.57	544.72
Railway transport	741.03	n/a
Urban transit	676.24	624.69
Highway and bridge maintenance	576.79	617.00
Total transport services	588.75	602.09
Total industrial aggregate	490.95	449.07

(a) Excluding incidental services.
(b) Excluding household movers and buses.

Source: SC 72-002. Figures are for all employees and include overtime.

For Manitoba, average weekly earnings in transport services were 2.3% higher than in Canada, in contrast to the general industrial situation of lower earnings in the province. This reflects Manitoba's high share of railway employment, where average weekly earnings are high. Although actual figures of railway earnings are not released for Manitoba, wage scales are negotiated on a national basis and there is little geographical variation in earnings. However, with a continuing decline in rail transport, the favourable earnings position for Manitoba in transport services may be gradually eroded over time.

In air transport, average weekly earnings in Manitoba were very similar to the Canadian figure. For the trucking industry, earnings in Manitoba were 1.7% above the national average. In highway and bridge maintenance, they were 7.0% above the national average. Urban transit earnings fell 7.6% short of the Canadian figure, but nationally much of this employment is in high cost and high wage metropolitan areas, such as Toronto and Vancouver.

2.2 THE PORT OF CHURCHILL

Although the present study has not included any original research on the Port of Churchill, comment on Churchill is essential to any survey of Manitoba transportation over the next decade. Churchill has been a key concern of Manitoba governments of all political persuasions for many decades. Earlier planning exercises in the Manitoba economy were reviewed in Chapter 1 of the present study; the need to develop Churchill featured in the COMEF report of 1963 and in the Guidlines Report of 1973. The TED Report of 1969 did not deal with northern transportation, as this would have been duplicative of the Mauro Commission Inquiry, which reported in that year and also stressed the need to develop Churchill. Provincial concerns have continued over the years and the Economic and Regional Development Agreement for 1984-94 included a subsidiary Churchill agreement of $94 million of which over half was designated for transportation infrastructure.

The Port of Churchill has been the subject of extensive research over the years. The latest in-depth study was carried out by the IBI Group, together with a large number of associated consultants, and the Summary Report is dated March 1986. This work was funded jointly by Transport Canada and the Manitoba Department of Highways and Transportation. While it is difficult to summarize the study, as there were a large number of caveats, in broad terms the conclusions were:

(i) The port could be viable at a minimum grain throughput of 600,000 tonnes per year, but this should preferably be in excess of 800,000 tonnes. Grain shipments from Churchill reached a record 807,000 tonnes in 1977; they averaged 533,000 tonnes over the ten years 1976-85. IBI considered that a throughput at higher levels would be economically justified on the critical but unproven assumption that:

> the Canadian Wheat Board can sell grain at Churchill for a price which reflects the actual marine transportation cost differential for onward delivery of the grain. That is, the grain selling price FOB Churchill would be lower than FOB a lower St. Lawrence port by an amount approximately equal to the difference between ocean shipping costs from Churchill to the overseas destination and those from the lower St. Lawrence port to the overseas destination. (p.2)

The Canadian Wheat Board apparently refused to provide the relevant price data for reasons of commercial secrecy; clearly, this information is essential to a proper feasibility study of the port.

(ii) The resupply operations through Churchill to serve communities in the Central Arctic could be expanded, subject to resolution of a number of severe constraints. These include lower road/rail rates for moving goods to Churchill, service improvements on transshipment and better coordinated resupply activities. Without such developments, Churchill's role in resupply would be increasingly eroded by air services from further south direct to the Arctic communities.

(iii) It was not possible to find any other commodity movements that would be viable through the Port of Churchill, but future opportunities should be monitored. Twenty commodities were assessed in the study, with detailed examination of sulphur, coal and potash as export movements and phosphate rock as an import movement.

(iv) The Churchill shipping season could be extended with relatively little difficulty from the present dates of July 26/October 18 to a season of July 20/November 15.

The IBI study was not able to identify any substantial opportunities for new development in Churchill. The study concluded by pointing out the unique nature of "Canada's only deep water Arctic port with a rail connection to the south" and the value in terms of "national objectives such as defence, sovereignty and northern economic development" (p.6). The study stated that the federal and provincial governments have a choice in determining whether the Port of Churchill and the rail line south should continue to operate or be closed. This was a political decision, which could not be made purely on economic grounds. If the decision is to continue operating the port, governments have the further choice as to whether to retain or eliminate the Churchill grain program. Elimination of the grain program would require "substantially larger sums to maintain the Port and rail line in operation without the economic base of grain traffic" (p.7). The alternative was "to continue the present arrangements, which will put grain producers at an increasing disadvantage because of required costs for new Churchill rail cars or line improvements" (p.7).

A companion study was carried out at the same time on tourism and transportation by Marshall Macklin Monaghan Ltd. This study implied that, if the demand for increased tourism were to materialize, there would be no major problems in the provision of transport facilities.

The UMTI terms of reference did not call for a repeat of the in-depth research of the IBI Group. The IBI findings are consistent with earlier studies of the Port of Churchill and there does not appear to have been serious criticism of the factual results. IBI avoided firm recommendations on the grounds that these would have to be made on the basis of "national objectives", such as defence and sovereignty, which cannot be assessed in the course of an economic study. The material below is confined to a brief review of developments since the IBI report of 1986, the findings of an UMTI visit to Churchill on October 6, 1988, and other comments on Churchill which have been made in the course of the study.

Experience in the Port of Churchill in the years following the release of the IBI report was initially reassuring. Although the export was confined to barley, the 1986 movement of 591,000 tonnes was a record for the 1980s and the figure was only slightly less than this at 569,000 tonnes in 1987. However, with the drought of 1988, only two ships visited Churchill and the total export through the port for that year was 51,000 tonnes. The port was late in opening for the 1989 season with the first ship arriving on August 25; total shipments in 1989 amounted to only 292,000 tonnes.

UMTI representatives, accompanied by the Executive Secretary of TIDAC, paid a visit to Churchill on October 6, 1988 and met with the then mayor, Mark Ingebrigtson, and business and community leaders there. There is, of course, a strong community commitment to the future of the port and also considerable concern. The port does not generate massive employment, reaching a maximum of perhaps 130 jobs during the July 26/October 18 season, but it was the basic reason for the development of the town at the beginning and, in spite of Arctic resupply and a promising tourist industry, it is still essential to the economic base.

The future of Arctic resupply continues to cause concern. Competition from Eastern Canada has been a very real problem for many years and there is a danger of Churchill's being bypassed as a result of resupply by air from communities in the south. Churchill may also be under increasing pressure in the resupply business when the runway at Rankin Inlet is extended to 6,000 feet in 1992. Although there was little criticism of the operations of the Northern Transportation Company Ltd. (NTCL), which provides resupply services to points beyond Churchill, the opinion was expressed that NTCL should not charge the same rates for backhaul from the Arctic as it charges for headhaul, as many of the barges return empty. Lower backhaul rates would facilitate the return of equipment and other goods that otherwise are abandoned in the Arctic; this would have environmental as well as economic advantages.

Given the excellent runway and underutilized facilities of the airport, the community leaders in Churchill felt that the full potential for air services had never been achieved. They felt that in recent years there had been some deterioration in services provided by

Transport Canada in runway maintenance and navigational aids and by Environment Canada in the provision of weather briefs. It is also difficult to maintain emergency ambulance service when the airport does not offer 24 hour service.

The question of an all weather road to Churchill was also discussed and Mayor Ingebrigtson suggested that a 180 mile road could be built between Gillam and Churchill following the esker which provides a natural and stable road bed. He felt that the construction of this road, and particularly the bridges needed, could be minimized by assistance from the U.S. Army Corps of Engineers and the U.K. Royal Engineers in return for the military experience that this would afford and the strategic advantages to the NATO community. The Manitoba Government has recently pursued this possibility with National Defence Canada, but the response was not encouraging. The construction of a road would obviously have strong repercussions on the future of the railway, with a major potential cost saving from the elimination of rail passenger service and, as suggested in a number of interviews, the possible abandonment of the railway itself.

The factual findings of the IBI study are not new, but they are consistent with earlier studies. On the positive side, the tourist industry to Churchill is expanding; this does not seem to raise major transportation issues. On the negative side, the future of the Port of Churchill presents a problem. IBI did not find any bulk movements other than grain, which are presently economically feasible for Churchill. A grain movement of at least 600,000 tonnes per annum, but preferably in excess of 800,000 tonnes, is needed according to the IBI study. The larger figure has not been achieved since 1977 and low exports in 1988 and 1989 do not augur well. The Arctic resupply operation has been under pressure for many years and this will continue.

In an examination of rail costs from Thompson Junction north to Churchill, IBI identified $4.6 million per annum as the annual loss on the line. Some two-thirds of this was covered by payments under the Western Grain Transportation Act and the other one-third was an expense to CN itself. In addition, there are the subsidy costs to VIA for passenger service to Churchill and the marine costs estimated by IBI at $4.6 million for maintaining Churchill. These costs have not been subject to detailed analysis in the present study, but it is quite clear that they do indicate a very considerable expenditure of public funds.

However, the future of the Port of Churchill is not purely an economic issue; it must depend upon an optimal mix of activities in grain transport, resource development, tourism and services for the north.

2.3 PROSPECTS AND CONCERNS

This section starts with a summary of Chapter 2.

1. The transport service industries are extremely important to Manitoba. On 1989 figures, they provided employment for some 28,500 Manitobans, which was about four times the employment generated in the transport equipment industry.

2. In 1989, Manitoba accounted for 6.1% of total Canadian employment in transport services. This is substantially higher than the Manitoba share of Canadian population (4.1%) and reflects the traditional role of Winnipeg as a transportation centre. In all three major modes, and especially in rail, Manitoba has a share of national employment substantially above the share of population and this excess of employment represents part of the economic base of the province. As a preliminary calculation, the export of transport services beyond provincial boundaries provides Manitoba with some 10,600 jobs as part of its economic base - 1,000 in air, 2,900 in highway and 6,700 in rail.

3. The transport service industries, both nationally and in Manitoba, have a substantial proportion of employment in large establishments. Of the total employment of 28,500 in

Manitoba, over 20,000 jobs are provided by eight large employers - CN Rail, CP Rail, Manitoba Government employees on highway and bridge maintenance, Air Canada, Canadian Motorways, Reimer Express, Winnipeg Transit and VIA Rail. Of these eight large employers, four - CP Rail, the two trucking companies and Air Canada - are in the private sector.

4. Unlike most service industries, employment in transport is not growing in Canada; in Manitoba, employment has declined slightly. Manitoba is very highly committed to rail transport, where employment has been declining nationally in Canada for many years and especially in the 1980s. Further reductions in the labour force are certain. This is a particularly difficult burden in a province which relies heavily on railway employment.

5. Average weekly earnings in transport services are high. Over the whole composite of industrial activities, average weekly earnings in Manitoba are currently 8.5% below the Canadian average, but in transport services Manitoba is 2.3% above the Canadian figure. Earnings in Manitoba run at about the national level in each of the three major modes - air, highway and rail. However, rail is the best paying mode and the high employment in Manitoba pushes the overall figure of average earnings in transport above the national average. With declining railway employment, this advantage will be eroded.

6. The air, highway and rail modes are addressed in later chapters. The other transport sectors - urban transit, highway and bridge maintenance and miscellaneous transport and services - provided 7,300 jobs in Manitoba in 1989, but these relate mainly to the local Manitoba market. As they do not offer opportunity for the export of services, they are not pursued further in the present study.

7. The second section of this chapter addresses the Port of Churchill, focusing mainly on developments since the in-depth study of the port carried out by IBI in 1986. After two reasonable years for grain shipments, only two ships left the Port of Churchill in 1988 and

exports were also low in 1989. The broadening of the export base beyond grain does not seem to be economically feasible at the present time. Arctic resupply operations from Churchill continue to face competition from Eastern Canada and from air resupply originating south of Churchill.

8. The future of Churchill cannot be settled purely in terms of economics as wider issues are involved such as defence, sovereignty and northern development. The challenge is to determine the most effective combination of activities in grain transport, resource development, tourism and services for the north to allow the survival of the port. It is not satisfactory to continue the policy of the last two decades, with the port regarded almost as a marginal operation for grain exports, subject occasionally to substantial infusions of funds, which appear to produce no lasting solution. The future of the Port of Churchill has to be considered in a broader context to reflect the wider national interests.

Returning to the overview of transport services in Manitoba, prospects and concerns are dominated by two issues. Firstly, Manitoba is very heavily committed to the rail transport mode and employment is declining in the province and across Canada. Because of this heavy commitment to railway employment, the problem of finding replacement jobs is greater than in most areas of the country. The major challenge to the year 2000 is to find an offset to declining employment opportunities in the rail transport industry.

Secondly, employment in the major transport modes is often not necessarily tied to a location in Manitoba. Many activities are, to a greater or lesser extent, "footloose" and could move elsewhere. It is essential to keep these jobs and to increase their number if the transport industries are to prosper and continue to make their large contribution to the employment base of the province.

The chapter concludes with a general statement of challenges facing the federal and provincial levels of government in respect of the transport service sectors.

1. The federal government should:

(a) recognize that Manitoba's large commitment to railway transport, where employment is inevitably declining, implies a heavy burden and assist in establishing offsetting employment opportunities in other economic activities;

(b) develop strategies, in conjunction with the province, for a long-term viable role for the Port of Churchill, appreciating that, in addition to an export grain movement, this involves wider issues such as defence, sovereignty and northern development.

2. The provincial government should:

(a) ensure an attractive environment in Manitoba for the transport service sectors, with this relating to a variety of issues ranging from training to taxation;

(b) recognize that much of Manitoba's employment in transport is to service demand from elsewhere in Canada and that this outside demand contributes over 10,000 jobs to the province.

CHAPTER 3: THE AIR TRANSPORT INDUSTRY

This chapter reviews the air transport mode in Manitoba. Section 1 is a statistical examination of employment in the mode, together with a discussion of services provided. The second section reviews the individual carriers and concerns expressed in the course of interviews. The views of labour are then considered. The chapter closes with a summary and general review of prospects and concerns relating to air transport in Manitoba.

3.1 THE MANITOBA AIR TRANSPORT INDUSTRY

3.1.1 Employment in the Air Transport Industry

The statistical discussion in this chapter is in terms of employment. Although not included below, figures are also available on passengers enplaning and deplaning and origin and destination statistics (O. and D.) for Winnipeg and some other airports in Manitoba. Because of impressive growths of productivity in the industry, output figures in terms of passengers and freight carried have increased much faster than employment.

Canadian employment in air transport totalled 63,900 in 1989, where 57,400 jobs were with air carriers and 6,500 jobs in services incidental to air transport, mainly the operation of airports. To give further detail on the employment of air carriers, it is necessary to go back to 1988, but data are published at this time only for January/September, 1988. The employment of Level I-III carriers totalled 47,600, with these carriers defined as carrying at least 5,000 revenue passengers or at least 1,000 tonnes of revenue goods per annum. Level I carriers were required to carry at least one million revenue passengers or 200,000 tonnes of revenue goods per annum and only two carriers qualified. Air Canada employment was 22,000 in January/September, 1988 and Canadian Airlines International Limited (CAIL) 16,500, with this latter figure including the 2,400 employees of Wardair.

Table 3.1: Employment in Air Transport

	Canada Levels I-III	Canada Total	Manitoba Total	Manitoba Share - %
1966	n/a	23,200	2,500	10.8
1971	28,100	31,300	2,200	7.0
1976	38,700	41,800	2,800	6.7
1981	n/a	46,900	3,100	6.6
1983	42,100	50,800	3,000	5.9
1984	42,300	53,300	3,100	5.8
1985	43,300	53,900	3,000	5.6
1986	45,500	55,300	3,100	5.6
1987	46,400	55,200	3,400	6.2
1988	47,600	59,500	3,500	5.9
1989	n/a	63,900	3,600	5.6

Source: Levels I-III from SC 51-002, with 1988 figures relating to January/September as fourth quarter not published at this time. This source does not give a geographical breakdown. Canada and Manitoba Totals from SC 72-002. 1983 relates to April 1983/March 1984 to avoid the effects of a major statistical reclassification. 1989 covers latest available annual data for November 1988/October 1989.

Air transport employment in Canada doubled in the fifteen years between 1966 and 1981 and has increased by some 36% in the 1981-89 period. Air transport has, of course, been the strongest growth area in transport employment since the Second World War and this is likely to continue until at least the end of the century.

Manitoba's employment in air transport in 1989 was 3,600. This was a 5.6% share of national employment and exceeds our 4.1% share of population. Air Canada had employment of 2,100, CAIL provided 450 jobs, the Gemini computerized reservation system contributed 160 jobs, and U.S. airlines about 30 jobs. Approximately 700 jobs were attributable to air operations in northern Manitoba. There were some 300 jobs in services incidental to air transport and these related mainly to the operations of Winnipeg International Airport, which included the airport itself and the air traffic control function. Employment at other airports throughout the province is relatively small. (These figures total 3,740 and not the 3,600 recorded above. The explanation is either the exclusion of some smaller northern carriers from Statistics Canada coverage, or possibly the statistical classification of Gemini elsewhere than in the air transport sector.)

Employment in air transport has increased substantially in Manitoba, but not as rapidly as for Canada as a whole. Fluctuations in the Manitoba share of total employment of the order of 0.3% are not significant and can be due to rounding, sampling fluctuations, or random year-to-year variations. The Manitoba share of employment in air transport has remained fairly constant over the last seven years. The drop in the Manitoba share of employment between 1981 and 1983 seems to be the result of statistical reclassification, effective in April 1983. Statistics Canada adjustment factors show that this adversely affected the Manitoba share, although there is no ready explanation for this statistical peculiarity.

The earlier drop in Manitoba's share of Canadian air transport employment, particularly between 1966 and 1971, was unfortunately very real. This was the time when Manitoba was losing its Air Canada overhaul facilities to Montreal and the Manitoba share of Canadian employment fell by 3.8 percentage points. This was equivalent to at least 800 jobs. It would have been instructive to have documented back to the mid-1950s when Air Canada corporate headquarters were transferred from Winnipeg to Montreal, but it was not possible to compile data prior to 1966.

To conclude this discussion of the structure of employment in air transport, it is useful to give the following breakdown of the employment categories for Canadian Level I - III carriers in January/September, 1988; similar figures are not available for Manitoba.

Table 3.2: Air Transport Employment Categories

	January/September 1988
Pilots and co-pilots	5,200
Other flight personnel	7,300
General management and administration	3,900
Maintenance labour	8,100
Aircraft and traffic servicing	15,400
Other personnel	7,700
Total	47,600

Source: SC 51-002.

On-board employment of pilots, co-pilots and other flight personnel totalled 12,500 or 26% of employment in air transport. Maintenance accounted for 8,100 employees or 17% of total employment. Both maintenance work and assignment of flight personnel are concentrated in specific locations in Canada and not spread across the country as a whole. It is important for Manitoba to continue to be a location for overhaul, flight crew assignments and general administrative functions, because the job opportunities from having planes simply land and depart are much more limited.

3.1.2 Air Services in Manitoba

This section discusses in a general way the quantity and adequacy of air services provided in Manitoba. However, an in-depth analysis of air service quality would be beyond the scope of the present study. The perceptions of users of transport services in respect of the air mode are described later in section 4 of Chapter 9, but some attention is given to these views in the present section.

The two mainline air carriers, Air Canada and CAIL, both operate frequent passenger and cargo flights from Winnipeg to all parts of Canada, with connections to transborder and international destinations. In the course of the present study, there have been no complaints as to the adequacy of these services. Indeed, the quality of air service between Winnipeg and other parts of Canada has been described on several occasions as a locational advantage for the city. This is a considerable tribute to the two mainline carriers.

In transborder traffic, Air Canada provides direct daily service between Winnipeg and Chicago; in the winter there is also direct service to Montego Bay, Orlando and Tampa. CAIL does not provide any direct service between Winnipeg and the U.S. on an on-going basis, but it has winter flights to vacation destinations. Both Air Canada and CAIL, of course, provide extensive services to the U.S. with changes of plane in other Canadian cities. Northwest Airlines operates four flights daily between Winnipeg and Minneapolis, with connections beyond to other points in the United States and abroad.

In the course of the UMTI study, the need was frequently expressed for a direct service between Winnipeg and Denver, Colorado, with the added attraction that the Denver hub offered service to other points in the United States. A twice daily Winnipeg-Denver service was re-established in June, 1989, provided by Aspen Airways' United Express. This is a partner airline of United Airlines, but ownership is completely independent from United Airlines. Unfortunately, financial problems in the initial development stage led to the discontinuance of this service effective December 7, 1989.

In July, 1989, the Manager of Route Strategies of American Airlines indicated an interest in this airline's establishing service three times a day between Winnipeg and Chicago. This would be a vast increase in seats on this route, presently served by Air Canada on a once a day basis. American Airlines would require authorization through a U.S.-Canada bilateral agreement for the commencement of such service. The future of the American

Airlines' plan is at present unclear, but at least it shows potential carrier interest in this general area.

There are at present no direct international services between Winnipeg and overseas destinations by the polar route. Until approximately five years ago, such service was provided by Air Canada between Winnipeg and London and by CP Air between Vancouver and Amsterdam, stopping in Winnipeg. The Manitoba government is anxious to re-establish direct passenger links between Winnipeg and Europe and press reports have indicated that discussions took place in late 1989 with Air Canada, CAIL, British Airways and KLM Royal Dutch Airlines. In January 1990, Air Canada announced twice-weekly service between Winnipeg and London for the summer of 1990; although this is via Ottawa rather than by the polar route, it is at least a step in the right direction.

Since the early days of aviation, airline services have been important to northern Manitoba, particularly to communities without readily available surface transportation. In addition to Canadian partner services, CAIL itself provides service on a daily basis or better to Thompson; six days a week to the The Pas; five days a week to Churchill and Gillam; and three times a week to Flin Flon. The other three large operators in the north are Perimeter Airlines and Northland-Air Manitoba, both headquartered in Winnipeg, and Calm Air, a Canadian partner based in Thompson. In total, there are over one hundred licenced commercial air carriers in Manitoba, working from more than fifty bases in the province. A wide variety of services is offered, ranging from regular and charter passenger and freight service to specialized functions such as aerial crop spraying.

The Manitoba Government Air Service works from two main bases -Winnipeg and Thompson - with a fleet of twelve aircraft. This operates mainly in the north and provides forest fire fighting services, ambulance services, business travel for provincial employees, transportation of medical patients from isolated points, and Emergency Measures Organization functions. The province operates and maintains 31 airstrips in Northern

Manitoba communities and 21 of these are certified public use airports. Manitoba Hydro operates an additional four airstrips, of which three are certified.

In southern Manitoba, Brandon is served by Ontario Express, a Canadian partner, which provides Jetstream 31 commuter service twice daily on weekdays and once daily at weekends. There are also services linking Swan River and Dauphin to Winnipeg provided by Keystone Air and Perimeter Airlines. As reported later in Chapter 9, interviews with community leaders in Brandon in August 1988 showed considerable dissatisfaction with the quality of air service in the city and a feeling that inadequate service inhibited economic development. This has been a concern in Brandon for over twenty years.

Brandon had air service to Winnipeg and Regina in the 1960s, no service by 1972, commuter service to Winnipeg in 1973 and no service from 1974 to June 1979. Commuter service resumed in 1979 and, in 1981, PWA introduced a transcontinental service of Calgary-Brandon-Toronto. By 1983, the commuter service had disappeared. The transcontinental service continued until 1985, when a stop at Thunder Bay was added to the route. In 1988, the Calgary service was dropped, the Toronto service was routed through Winnipeg and a Winnipeg-Brandon commuter service was added. In early 1989, the service from Brandon to Toronto was discontinued and Brandon is now left with only commuter service.

In a separate study provided by UMTI to TIDAC and the City of Brandon, Brandon's air services were compared with those of other medium sized cities in the Prairies - Lethbridge, Medicine Hat, and Prince Albert. From a consideration of population and distances to the closest large city, it was concluded that Brandon did not seem underserviced compared with these three cities. (The comparison was to have included Red Deer, but there was no scheduled air passenger service there at the time of the examination.)

Brandon is only 189 kilometers from Winnipeg; over this distance, an airline has difficulty competing with the private automobile in the face of a 40 minute flight, travel time to and from terminals, time spent in terminals themselves, and the greater flexibility in timing offered by the automobile. On transcontinental travel, Brandon has always suffered from being a potential spoke to the Winnipeg hub. With recent developments towards increased hub and spoke operations throughout North America, this problem is not likely to disappear. Yet, recognising all these real problems does not dispose of the Brandon concern that lack of air service is impeding economic development. This is considered later in Chapter 9.

3.2 THE MANITOBA AIR CARRIERS

This section reviews the contributions to the Manitoba economy in terms of employment of Air Canada, Canadian Airlines International Limited, the Gemini Airline Reservation System, and other air transport employment.

3.2.1 Air Canada

Air Canada is by far the largest employer in the air transport industry in Manitoba. With 2,100 employees in 1989, this is equivalent to almost 10% of the company's national employment. After Quebec and Ontario, Manitoba ranks as the third most important province in terms of Air Canada's employment. The explanation of this heavy Air Canada presence in Manitoba is because company-wide functions are performed here. These include the location of Air Canada's Finance Branch with 570 employees, the overhaul base with 470 employees, and the assignment of pilots and flight attendants providing 420 jobs. The District Office, with its sales, servicing and reservations activities, provides 300 jobs. The balance of 340 jobs are in computer operations, cargo, line maintenance and a variety of other activities ranging from purchasing to personnel. All this employment is in Winnipeg, as Air Canada no longer serves any other city in Manitoba.

The Air Canada Finance Branch is responsible for world-wide company operations covering all revenues and costs and interline ticket clearing. Of the 570 employees in this operation, the majority are employed on clerical tasks and 90% of the staff is female. There is considerable in-house training and skill upgrading in accounting and computer applications for more senior positions. Employment has declined very slightly over the past few years, as the productivity increases from the automation of procedures have more than offset the growth in airline travel. This may continue, as future developments lead towards a "paperless audit trail", but sudden change is not expected. In theory, the Finance Branch could be located anywhere in the world to minimize costs; in practice, it would be expensive to move from Winnipeg and the city has very real attractions in its well motivated staff and good labour relations.

The Air Canada overhaul base in Winnipeg has had rather a chequered history. In the 1960s, Air Canada decided to phase out overhaul activities in Winnipeg and this duly took place in spite of an extremely strong protest campaign organized by the Manitoba Government with wide community participation. Air Canada activities were supposed to be replaced by the private sector with assistance from the Federal Government over the transition period. By 1969, the base was operating with a skeleton staff of about sixty, but more work was reassigned to Winnipeg in 1971. By 1978, the labour force was back to 200 and currently it stands at 470. This labour force is regarded as very stable and productive and Air Canada is well satisfied with performance.

The present work at the overhaul base is mainly air frame overhaul on the Boeing 727 fleet. In addition to Air Canada work, B727 overhaul has also been carried out on contract for a variety of carriers including Alaska Airlines and Federal Express. In terms of price and quality, the base is considered competitive worldwide. There has also been some work on DC-8 conversions and on RCAF Boeing 707 overhauls; work on DC-9s is confined to the overhaul of seats.

The B727 is an aging aircraft due to be replaced this year by the Airbus A320, but this will require little overhaul before 1991. In public announcements of April 1988, Air Canada indicated that it was "leaning toward the new airplane going into Winnipeg", but that this would not preclude handling the first of the new planes in Montreal, because the more advanced technology there would facilitate the troubleshooting which always arises in any new equipment. The future of the Air Canada overhaul base has not been in the news for some time, but the intentions expressed in April 1988 now seem much more firm. In the summer of 1989, Air Canada informed UMTI that there was a commitment to do A320 heavy maintenance in Winnipeg.

There can be shortages in the supply of qualified labour for air frame overhaul work in Winnipeg. There is no local training for apprentices and technicians and this takes place at Thunder Bay, Calgary and other institutions further from here. This problem of inadequate training facilities for the aerospace industry in Manitoba was also raised by the transport equipment manufacturers and is addressed again in Chapter 6.

Air travel is still growing and maintenance requirements are increasing. However, in the long-term, technological changes in aircraft will tend to reduce maintenance demands. New types of aircraft are equipped with computerized fault reporting systems linked with expert diagnostic systems; it is possible to troubleshoot problems much more quickly than in the past. In addition, airlines are upgrading their scheduling of preventive maintenance. These developments will reduce the demand for maintenance resources.

Winnipeg is the only pilot and co-pilot assignment base for Air Canada between Toronto and Vancouver, but flight attendants are also assigned at Calgary. Air Canada provides roughly 240 jobs for pilots and co-pilots in Winnipeg and 180 jobs for flight attendants. Some of these crew members do not actually reside in Manitoba - in the case of pilots, roughly one-quarter are resident outside the province. The corresponding figure has not been obtained for flight attendants, but the proportion is probably much lower. In spite of out-of-province residents, the choice of Winnipeg for crew assignment adds considerably to the number of highly paid professional jobs in the city. Air Canada has considerable flexibility in the number of flight crews assigned to Winnipeg and this employment is by no means captive to the province.

The discussions with Air Canada did not produce any long list of concerns. Air Canada is very important in transport employment in Winnipeg and it has been shown that the bulk of this employment is the result of company decisions on location and not specifically attributable to the need to service Manitoba traffic. The UMTI interviews did not produce any suggestions of any reductions in these activities and the general impression was that Air Canada seemed to be well satisfied with the province.

3.2.2 Canadian Airlines International Limited

In 1989, Canadian Airlines International Limited (CAIL) had just under 450 employees in Manitoba; these were located in Winnipeg, apart from about 20 staff at points in northern Manitoba. This employment figure does not include the two CAIL partners who operate in Manitoba, Calm Air and Ontario Express. There are, of course, no longer any separate Wardair operations. As indicated earlier, the latest published figure for CAIL employment across Canada was 16,500 in 1988. Manitoba's share of this employment is therefore under 3%.

The CAIL Winnipeg office administers a territory stretching from Sault Ste. Marie, Ontario, to the Saskatchewan/Alberta border. Of the 450 CAIL employees in Manitoba, perhaps 300 are required to serve Manitoba traffic; these consist of staff employed in airport services and cargo, and a substantial part of the administration, clerical and reservations personnel. CAIL has more geographical flexibility in the location of flight attendants and regional headquarters functions. Winnipeg is the only base for CAIL flight attendant assignment between Toronto and Alberta, but the company has announced that it will cease to assign pilots in Winnipeg effective September, 1990.

The main differences between CAIL and Air Canada are that CAIL does not have any major head office functions or a major maintenance facility in Winnipeg. CAIL is not currently considering any relocation of head office functions, such as finance, to Manitoba. At the beginning of the 1980s the CAIL predecessor company, PWA, considered establishing a maintenance base in Winnipeg, but this did not materialize. With the amalgamations which led to the formation of CAIL, there are now maintenance bases in Vancouver, Calgary, Toronto, Montreal and Halifax. The company sees a need to rationalize. This does not preclude consolidation of some activities in Winnipeg and the Province of Manitoba is currently discussing this matter with CAIL. Winnipeg has very real advantages for maintenance activities in its central location, its uncongested airport, and the easy access to spare parts for the A320 airbus fleet which CAIL has now ordered.

3.2.3 Gemini Airline Reservation System

The Gemini Airline Reservation System is a computerized reservation system for use in the airline industry. The company was established in 1987 when Air Canada and CAIL merged their reservations systems, having determined that an integrated system located in Winnipeg would make for maximum efficiency. The alternatives were to sign up with systems formed by U.S. carriers, such as American Airlines' Sabre, or for each of the Canadian carriers to attempt the difficult task of competing separately with global U.S. systems. Effective August 1989, one-third of Gemini was sold to Covia, a U.S. based reservation system, which is 50.1% owned by United Airlines. This gives Gemini exclusive rights in Canada to Covia's Apollo reservation system.

The services provided by a computer reservations system (CRS) are described in the following quotation taken from W.B. Jankowski: "Applying the New Competition

Legislation to the Deregulated Airline Industry: the Case of Computer Reservations Systems", *Proceedings of the Canadian Transportation Research Forum,* 1989 pp. 448-9.

> A computer reservation system consists of a periodically updated central database. CRSs distribute information on airline schedules, fares, rules and seat availability to subscribers, mainly travel agents. The CRSs allow the travel agents to list the flights, make reservations and issue travel documents to the customers. CRSs also distribute information and allow travel agents to book the services of participating hotels, car rentals, tour operators and other travel related business. Distribution of information is done electronically through a cathode ray tube terminal which is located on the subscriber's premises. Travel agents generally lease the necessary computer terminal and ticketing equipment from a vendor.
>
> An airline can be represented in CRS either as a "hosted" or a "participating" carrier. The "hosted" airline stores its complete inventory of seats in the CRS which then acts as the carrier's internal reservation and management systems. For the "participating" carrier, CRS does not operate as the internal reservation and management system, which means that the information on the availability of seats of the "participating" carrier is less accurate than on the "hosted" one.
>
> CRSs receive revenues from the two principal sources: (a) subscription fees paid by travel agents; (b) booking fees, paid by airlines and other travel suppliers whose services are sold by means of CRSs. CRS vendors charge booking fees for each flight segment, which is defined as one takeoff and landing (a journey with several stops will therefore have more than one flight segment).
>
> The importance of CRSs in the distribution of airline services arises from the fact that the vast majority of passenger tickets are sold by travel agents. Approximately 90 percent of all Canadian travel agencies use a CRS to make airline reservation and print tickets. Before CRS were introduced, travel agents had to use published paper guides for information about flights anf fares, or had an option to call the carriers directly. CRSs, by providing travel agents with instantaneous information about flights, seat availability, fares, hotels and car rentals, and other relevant information, can substantially reduce the time and the costs of search.
>
> .... The airlines "hosted" on a given CRS can provide a complete information on their seats because the CRS plays the role of an airline internal management system. Because of delays in sending messages,

> information on participating carriers is less accurate. To provide the travel agents with additional information about seat availability on participating carriers, several means of improved access to carriers' internal inventory of seats have been developed. One measure, which allows the agents to read information directly from an airline internal system, is called "direct access". "Direct access" requires that different CRS are connected with one another. A comprehensive form of "direct access", which allows travel agents to directly access data banks of each participating airline or other entity, to obtain schedule, pricing, seat availabilty and other reference material, is "parallel hosting".
>
> The most complete access, however, is guaranteed by the "last seat availability" feature, which, in addition to providing up-to-date information, allows agents to withdraw seats from airline inventory and receive confirmation from that airline's internal reservation system. All U.S. systems offer "direct access" feature to one another.

Shortly after Gemini was established in mid-1987, the Bureau of Competition Policy, a Canadian federal agency, sought dissolution of the merger on the grounds that this was anti-competitive. After a lengthy public hearing, the federal Competition Tribunal, which is the final arbiter on anti-trust issues in Canada, gave official clearance to Gemini in July 1989 to allow the merger to continue. The Province of Manitoba was a major intervenor on behalf of Gemini in this matter. This favourable decision was very important, not only to the efficient functioning of the Canadian airline carriers, but also to Winnipeg in terms of employment opportunities. At the time of the hearing, Gemini did not offer "direct access" and "last seat availability" to other CRSs, but it was ordered to provide these on a phased-in basis.

Gemini currently provides some 160 jobs in Winnipeg, of which all apart from about a dozen clerical workers are in the high-tech field. A further 30 jobs will be created in 1991 as part of Gemini's partnership with the Covia system of United Airlines. The computer related jobs of Gemini are important not only in relation to the airline industry, but in the extent to which they add to the overall computer expertise of Manitoba. To quote the Gemini director of operations from an article in the Winnipeg Free Press, July 13, 1989, the location of Gemini in Winnipeg is "a huge plum because otherwise the university and other computer centres would not have access to the same technology".

Canadians have worldwide expertise in long distance communication technology and large computer network operations. Salaries of programmers also tend to be lower than in the U.S. There are considerable attractions to a Winnipeg location for Gemini and the company seems well-satisfied compared with the original location of the Air Canada system in Toronto.

However, Gemini does have some problems. Telecommunication costs are a substantial part of total operating costs and include a 10% federal sales tax and a 7% provincial sales tax on telephone charges. Communication costs would be much cheaper from a U.S. location. In addition, Manitoba Telephone System (MTS) will not permit direct connection to their lines of any other supplier's equipment. This is the only telephone company in Canada that prohibits interconnects and this could be a major problem for Gemini when there is a need to use more sophisticated equipment than is currently sold by MTS. However, the potential problem has been substantially avoided by routing telecommunications through Telecom Canada rather than MTS.

3.2.4 Other Air Transport Employment

Air transport employment in northern Manitoba services appears to be of the order of 700. The three largest operators are Northland-Air Manitoba and Perimeter Airlines, both headquartered in Winnipeg, and Calm Air of Thompson. These airlines are all of broadly comparable size and, as at mid-1989, provided a total of 370 jobs. As mentioned earlier, there are over one hundred licensed commercial air carriers in Manitoba, working from more than fifty bases in the province. On the basis of consultation with experts knowledgable on this subject, these would seem to provide approximately 300 jobs. A precise estimate would involve a lengthy survey of these carriers, but the present study did not extend to an in-depth survey of northern carriers and their concerns.

Employment by Northwest Airlines on the Winnipeg-Minneapolis service is approximately 25. Ontario Express uses the services of other carriers as agents and has no employees in Manitoba. United Express, which provided the Winnipeg-Denver service, had only the equivalent of six full-time employees, but this service was discontinued in December, 1989.

Services incidental to air transport provide 300 jobs in Manitoba. These are mainly located at the Winnipeg International Airport. UMTI has recently completed a separate study in this area entitled *The Economic Impact of The Winnipeg International Airport.* The total employment associated with the airport, excluding travel agencies, the accommodation industry and the armed forces, was estimated at 3,700. However, although this figure is a valid measure of impact, it is not used in the present study. This is because it includes air carrier employment examined earlier in this section, other aircraft repair and overhaul activities examined later in Chapter 6, and several activities which have a strong aviation component but are not classified to the industry by Statistics Canada.

Finally, it should be pointed out that Transport Canada has its Central Region Headquarters in Winnipeg. This administers airports, air navigation and air safety programs for Manitoba, Saskatchewan, Northwestern Ontario and the Central Arctic. There are over 300 employees in this Regional Administration, although these are classified by Statistics Canada as public administration rather than as part of air transport.

3.3 ORGANIZED LABOUR AND THE AIR TRANSPORT INDUSTRY

Meetings with trade unions representing workers in the air transport industry were less extensive than those reported in the next two chapters on the highway and rail modes.

The meetings were with the Canadian Air Line Pilots Association (CALPA) and the Canadian Union of Public Employees (CUPE).

CALPA represents pilots at Air Canada, CAIL and a number of smaller airlines. CALPA acts as both a union and a professional association. It is actively involved in giving advice on such fundamental matters as aircraft purchases and modifications of airports; it also serves as a self-policing body of its members.

There is a total Canadian membership in CALPA of 3,500, of whom 1,900 work for Air Canada. The interview was with the Winnipeg local covering Air Canada employees. Air Canada has only four base stations for pilots - in order of size, Toronto is the largest with 970 pilots, followed by Montreal with 470 and Winnipeg and Vancouver, coincidentally each with 228 pilots. Although roughly one-quarter of the pilots based in Winnipeg actually live out of province, it was pointed out by CALPA that Manitoba still had a very large share of the company's pilots in relation to its population.

Winnipeg is designated as a "junior" base because it does not provide crews for the larger aircraft. Senior pilots, who want the higher pay associated with flying larger aircraft, have to bid for these positions in Toronto and Vancouver and move there at their own expense. The union did not think that this "junior" base designation was likely to change with the replacement of Boeing 727 aircraft with the slightly larger Airbus A320, starting in 1990.

CALPA did not envisage any vast change in total Air Canada employment or its distribution between the four bases over the next few years. Although air travel would continue to increase, improved technology will lead to economies in the use of labour. Specifically, the flight crew on the new A320 will be only two as against three on the Boeing 727.

The Canadian Union of Public Employees (CUPE) is the largest trade union in Canada and covers many sectors of the economy, including airline flight attendants. Approximately 400 flight attendants working out of Winnipeg are represented by this union, which is certified to represent the two major carriers and some smaller carriers.

The size of the cabin crew is a function of the number of passengers on board and is subject to Transport Canada regulation. There has been no move to reduce the size of the cabin crew in recent years and consequently overall employment has been increasing. However, although there have been no rumours of any reductions in the numbers of flight attendants based in Winnipeg, job security is always potentially a problem, as it can never be taken for granted that Winnipeg will always be a base for crew assignment.

These union interviews produced useful information, but did not unearth major concerns. However, they highlighted the extent to which airline employment in Winnipeg depends upon the city's continuing to be a designated base for the assignment of air crews. This designation is, of course, a recognition of the advantages of Winnipeg's central location for flight operations.

3.4 PROSPECTS AND CONCERNS

This section starts with a summary of Chapter 3. Prospects and concerns are then addressed.

1. The air transport industry has been the most rapidly growing transport mode in Canada for many years. Employment doubled between 1966 and 1981 and it has increased a further 36% in the last eight years. Because of impressive growth of productivity in the industry, output figures in terms of passengers and freight carried have increased much faster than this. Continued growth in the air transport industry is expected to the end of our study period in the year 2000 and beyond.

2. Manitoba currently has 5.6% of total employment in the air transport industry. This is substantially higher than the 4.1% share of Canadian population. Winnipeg was at one time the corporate headquarters of Air Canada and the loss of this function in the late 1950s caused a considerable decline in Manitoba's share of the air transport industry. This continued until the early 1970s, but the Manitoba share has remained reasonably constant in the 1980s. The total number of jobs provided in Manitoba by air transport and services incidental to air transport was some 3,600 in 1989. This employment is predominantly in Winnipeg, which accounts for almost 90% of the provincial total.

3. Air Canada is the largest employer of air transport workers in Manitoba, with total employment of 2,100. This amounts to almost 10% of the national employment of the company and places Manitoba in third position, after Quebec and Ontario, in terms of Air Canada employment. Air Canada provides roughly 1,450 jobs in Manitoba in its Finance Branch, which serves the company worldwide; its maintenance base which services Boeing 727 aircraft for the whole of western Canada; and its crew assignment of pilots and flight attendants. To a considerable extent, Air Canada has freedom as to where these three functions should be located. The remaining 650 workers are accounted for by sales and reservations, computer operations, cargo and miscellaneous administrative and clerical functions. Although some of these functions have to be located in Manitoba to serve provincial air travellers, not all this employment can be regarded as necessarily tied here.

4. Canadian Airlines International Limited (CAIL) provides 450 jobs in Manitoba and these amount to just under 3% of total CAIL employment. Although most of this employment is required to serve Manitoba traffic, there is still some flexibility in the numbers of flight attendants and reservations staff who are located here.

5. The Gemini Airline Reservation System is a computerized reservation system jointly owned by Air Canada, CAIL and Covia. It is located in Winnipeg and provides 160 jobs almost all of a "high tech" nature. The merger which formed this company was under

investigation by the federal Competition Tribunal and it was only in July, 1989, that the company won its case to allow the merger to continue.

6. Other airline carrier employment consists mainly of some 700 jobs provided by air carriers serving the north. The three largest operators are Northland-Air Manitoba, Perimeter Airlines and Calm Air, which together provides slightly over half of this employment. Manitoba employment by the U.S. carrier, Northwest Airlines, is small, amounting to only 25 jobs. Employment in services incidental to air transport numbers approximately 300, with most of these jobs at Winnipeg International Airport. However, as a separate UMTI study has shown, the economic impact of the airport stretches far beyond these direct employees.

7. Discussions with organized labour in the air transport industry did not unearth any major concerns. Although there are no immediate fears, the unions were very aware that the employment of flight crews in Winnipeg depends on airline decisions as to where their crew base points are located. In respect of pilots, the change from three man crews to two man crews in newer aircraft will limit the scope for future employment growth.

The summary above has indicated that a large number of air transport jobs in Manitoba are not necessarily captive to the province. However, Winnipeg has very real locational advantages to the airline industry, with its uncluttered airport, its excellent access to markets across Canada and in the U.S. and its convenience in dealing with offices across North America in a variety of time zones. Employment where the carrier has flexibility in location amounts to about 1,800 jobs - 1,450 in Air Canada's finance, overhaul and crew assignment functions; 160 in Gemini; and perhaps 200 in the other activities of Air Canada and CAIL. The remaining 1,800 jobs have more need to be located in Manitoba - 700 employees in northern air services, 300 employees in airport operations, the small employment of U.S. carriers and the balance of Air Canada and CAIL staff.

Discussion of quality of air service in respect of Brandon and northern Manitoba is postponed to Chapter 9. The study has not examined the contentious issue of zoning provisions at Winnipeg International Airport and encroachments through incompatible land use which can jeopardize the airport's operations; however, this is an issue which must be addressed by the City of Winnipeg. The recommendations below are confined to the provincial government. This may seem strange, given that air transport is a federal responsibility, but actions to ensure increasing employment seem to be primarily in the provincial domain.

The provincial government should:

(a) take action to make Manitoba a centre of excellence in the training of professionals and technicians for the air transport and aerospace manufacturing industries;

(b) ensure that, as the Boeing 727 is withdrawn from the Air Canada fleet, there will be a smooth transfer to A320 heavy maintenance at the Air Canada Winnipeg Overhaul Base and see whether it could be possible to locate any other Air Canada system wide functions in Manitoba;

(c) seek a greater Canadian Airlines International Limited presence in Winnipeg, with particular reference to an overhaul base;

(d) allow competition in the provision of telecommunications to minimize telecommunication costs incurred by the Gemini Airline Reservation System and reduce any danger of re-location south of the border where such costs are lower.

CHAPTER 4: THE HIGHWAY TRANSPORT INDUSTRY

This chapter reviews the highway transport mode in Manitoba. The discussion starts with a statistical review of employment and operating statistics for the trucking industry. Section 2 relates to concerns of interprovincial motor carrier operators, as expressed in interviews with UMTI staff. Section 3 addresses the concerns of labour. Section 4 proceeds to a brief examination of Manitoba highways in respect of maintenance and construction expenditures. The final section is a summary and general review of prospects and concerns relating to highway transport in Manitoba.

An earlier version of this chapter made considerable use of studies carried out by the Research and Planning Branch, Transportation Division, Manitoba Department of Highways and Transportation, chiefly with reference to the Task Force Review of Motor Carrier Regulations in Manitoba which reported in 1984. This was valuable work and the only reason why the results are not used more extensively in the present study is the time lapse since 1984. In May, 1989, UMTI completed a report entitled "Impact of Regulatory Reform on the For-Hire Trucking Industry Serving Rural Manitoba", with Dr. Barry E. Prentice as the project leader. The present study draws on this work in respect of the Manitoba intraprovincial trucking industry.

4.1 THE MANITOBA MOTOR CARRIER INDUSTRY

Basic statistics on the Manitoba motor carrier industry are presented in this section. The discussion starts with employment data for the for-hire motor carrier industry and then proceeds to operations. This is followed by a summary of findings of the recent UMTI report on intraprovincial trucking. Material is then presented on private trucking carried out by companies whose major activity is in another area, such as manufacturing, construction or wholesaling. The section closes with a brief discussion of the bus industry.

4.1.1 Employment

The main source of statistics on trucking is SC 53-222, "Trucking in Canada", which has been published on the same methodological basis since 1974 and includes detailed data on a provincial basis. However, the proportion of the trucking industry covered in this survey varies from year to year and this causes problems in measuring changes in employment.

The figures for Manitoba in Table 4.1 relate to the total employment of firms headquartered in Manitoba, and not to the number of trucking employees actually domiciled in the province. For example, the figures cover all employees of Reimer Express Lines, including those located outside Manitoba, but no employees of Trimac Transportation Services, which is headquartered in Calgary but still has employees domiciled in Manitoba. In addition, the employment figures do not include broker operators, who hire their labour and their tractors to trucking companies often on fairly long term contracts, as these are not classified as employees of the trucking firms. Statistics Canada has only recently commenced publication of numbers of broker operators; in October 1988/March 1989, there were 1,700 broker operators in Manitoba and 19,000 in Canada.

Table 4.1: Number of Employees: For-hire Trucking

	Manitoba	Canada	Manitoba share - %
1977	4,493	82,526	5.4
1981	5,339	90,782	5.9
1985	6,322	98,694	6.4
1986	7,603	97,277	7.8
1987	8,116	102,178	7.9

Source: SC 53-222. It had been the intention to show 1976 in the table, rather than 1977, but Statistics Canada states that there were data anomalies in Manitoba figures for 1976.

Table 4.1 shows an increase in employment in the trucking industry of some 24% over the last decade. However, this rate of increase could be overstated as a result of increased survey coverage of the industry. The rate of increase is also affected by changing use of broker operators. An increased tendency to use broker operators would lower the increase in the number of employees, while reduced use of broker operators in favour of company employees would augment the employment figures. Accurate figures are not available on an historic basis. Initially, it was thought that use of broker operators was increasing faster than the number of company employees, but at least one large Manitoba based trucking company has indicated that this is not the case.

The share of Manitoba based companies in the Canadian for-hire trucking industry is substantially higher than the 4.1% share of Canadian population. Nine of the thirteen largest Canadian interprovincial motor carriers are headquartered in Manitoba and the industry is extremely important to the province. The Manitoba share of Canadian trucking employment increased fairly steadily in the table from 1977 to 1985, but there was a quantum jump in 1986. It is not clear as to whether or not this was a statistical aberration. A further increase is almost certain for 1988 figures, when these become available. This is because of the closing down of one large carrier, Route Canada, which was not Manitoba headquartered, and the takeover by Manitoba based Canadian Motorways of Kingsway Transport, which increased the Manitoba headquartered component. So far, Manitoba's position as national headquarters for so many interprovincial trucking firms has been strengthened rather than weakened.

The next step is to go through the tedious task of reconciling the figures given in Table 4.1 with those given earlier in Chapter 2 on trucking employees domiciled in Manitoba.

a) Table 2.2 showed 7,900 employees in highway transport domiciled in Manitoba in 1989. Excluding employees in interurban and rural bus services, this figure falls to 7,400.

However, Manitoba employment in 1989 had shown a considerable increase on 1987, when the figure was approximately 6,400.

b) Comparing the 8,100 employees in 1987 of Manitoba headquartered firms, as shown in Table 4.1, with the estimate of 6,400 trucking workers domiciled in the province, there is a gap of 1,700. This would represent the number of employees of Manitoba headquartered companies who are located out of province minus the number of employees located in Manitoba but employed by companies headquartered out of province.

c) Statistics Canada estimates that, for October 1988/March 1989, there were 1,700 broker operators in Manitoba, as against 19,000 for Canada as a whole. These broker operators are not included in the employment figures. Similar estimates are not available for 1987.

d) The trucking industry in Manitoba in 1989 provided 7,400 jobs located in the province plus 1,700 broker operators for a total of 9,100 jobs. This gave Manitoba a 6.7% share of the combined figure of 136,000 trucking employees and broker operators in Canada in 1989.

e) With a 4.1% share of Canadian population, an estimate of the "export" component of trucking employment serving markets outside Manitoba can be obtained from the calculation 6.7% - 4.1% = 2.6%. When this is applied to the Canadian total of trucking employees and broker operators in 1989, this gives an export related employment in Manitoba of 3,600 jobs. (This is higher than the 2,900 jobs suggested earlier in Chapter 2, but this estimate did not include broker operators.)

4.1.2 Operating Statistics

Table 4.2 summarizes basic statistics relating to the for-hire trucking industry in 1987. The operating ratio is defined as operating expenses divided by operating revenues. The number of pieces of equipment operated by the for-hire trucking industry consists of straight trucks, road tractors, semi-trailers, full trailers and a small amount of other equipment.

Table 4.2: Basic Statistics of For-hire Trucking - 1987

	Manitoba	Canada	Manitoba share - %
Number of establishments	253	6,729	3.8
Operating revenues ($mn)	806.4	9,345	8.6
Operating expenses ($mn)	786.4	8,937	8.8
Operating ratio (%)	97.5	95.6	
Number of employees	8,116	102,178	7.9
Wages and salaries ($mn)	241.2	2,909	8.3
Average compensation per employee ($)	29,717	28,473	
Number of pieces of equipment operated	14,146	166,232	8.5

Source: SC 53-222.

Manitoba accounted for 3.8% of the trucking establishments in Canada reported in the 1987 for-hire trucking survey. However, these establishments were larger than those in the country as a whole and Manitoba accounted for 8.6% of operating revenues and 8.5% of all trucking equipment operated in Canada. Compared with Manitoba's 4.1% share of the Canadian population, these figures confirm that the importance of the for-hire trucking industry in Manitoba stretches far beyond the immediate transport needs of the province itself. The figures summarized in the table above are now examined in greater detail and with supporting data to outline the impact of the trucking industry.

Table 4.3 shows establishments by type in the for-hire trucking industry.

Table 4.3: Number of Trucking Establishments by Type - 1987

	Manitoba	Canada	Manitoba share - %
Intercity	180	4,851	3.7
Local and Off-highway	73	1,878	3.9
Total	253	6,729	3.8
Of which,			
International	59	1,335	4.4
Interprovincial	105	1,955	5.4

Source: SC 53-222.

At risk of stating the obvious, the motor carrier industry does not consist of establishments which operate exclusively in one market, for example local carriage or international. Rather, many carriers operate in several markets and are not confined to one particular area of operation. The intercity motor carriers are defined as those who earn the "predominant portion of revenue" from shipments moved more than 24 kilometres on public roads. Local and off-highway carriers are defined as those whose "predominant proportion of revenue" was earned on shipments moving 24 kilometres or less on public roads or whose major earnings came from movements on private roads as distinct from public highways. These definitions are mutually exclusive - in other words, a carrier must be classed as intercity or local and off-highway and not as both.

In 1987, Manitoba had 180 intercity trucking establishments and 73 local and off-highway operators. Of the intercity carriers, 105 operated in interprovincial markets and 59 in international markets. These figures are not additive, as the majority of international carriers also had interprovincial licences. Subtracting the figure of 105 from the total of 180 intercity operators, this would leave 75 for-hire trucking establishments operating purely within the province of Manitoba. However, this is not a complete count and does not appear to include all the carriers operating within the province in specialist areas such as the transport of cattle, milk and building equipment.

Table 4.4 shows how operating revenues were earned by motor carriers in Manitoba and Canada in 1987. In interpreting the table, the line "local and off-highway" shows the earnings of all carriers - local and off-highway, intraprovincial, interprovincial and international - from local and off-highway traffic, and not the revenues obtained from all sources by carriers classified as predominantly local and off-highway.

Table 4.4: Trucking Operating Revenues ($million) - 1987

	Manitoba	Canada	Manitoba share-%
Local and off-highway	44.5	1,437	3.1
Intraprovincial	159.1	3,985	4.0
Interprovincial	526.5	2,502	21.0
International	76.3	1,421	5.4
Total	806.4	9,345	8.6

Source: SC 53-222.

Manitoba headquartered establishments enjoyed 8.6% of total Canadian revenues from trucking operations in 1987 and this was considerably in excess of the Manitoba share of 4.1% of Canadian population. In respect of revenues from local and off-highway traffic, the Manitoba share was only 3.1%. However, this is low mainly because there are not many off-highway trucking activities in Manitoba; off-highway trucking is very localized in British Columbia, Alberta and Quebec.

In intraprovincial trucking, Manitoba accounted for 4.0% of Canadian activity. Given the high concentration of population in Winnipeg and the consequent reduction in opportunities for intraprovincial trucking, it is surprising that Manitoba fares so well in this part of the industry. In international traffic, Manitoba has 5.4% of the Canadian domiciled market. This is not a very high figure, as north-south traffic is much less important than east-west traffic to Manitoba. If free trade and deregulation initiatives increase the proportion of north-south traffic, there will be obvious need for adjustment by the Manitoba trucking industry to the changed traffic patterns.

The great strength of the Manitoba trucking industry lies in the interprovincial sector. In 1987, Manitoba headquartered establishments enjoyed 21.0% of total Canadian revenue from interprovincial traffic. Only Ontario was ahead of Manitoba in this sector of the trucking industry. In absolute terms, the revenues earned in interprovincial trucking by Manitoba headquartered carriers exceeded by a wide margin those earned in Alberta and Quebec, respectively the third and fourth ranking provinces. This is no small feat, considering differences in population. With the end of Route Canada and the take-over of Kingsway by Canadian Motorways in 1988, the proportion of interprovincial revenues attributed to carriers headquartered in Manitoba should show further increases in 1988 and 1989.

Earlier in Chapter 2, it was shown that Manitoba enjoyed 13.2% of total Canadian employment in railway transport. The Manitoba share of interprovincial trucking is at least as high as this, even when allowance is made for employees of companies headquartered in Manitoba who are not actually domiciled in the province. If Manitoba can maintain its share of interprovincial trucking, the province will not be at much employment risk from the transfer of long distance traffic from one mode to the other.

The operating ratio expresses total operating expenses as a percentage of total operating revenues. The lower the operating ratio, the more revenues are available for purposes other than operating expenses. Table 4.5 shows that the operating ratio for the trucking industry in Canada was 95.6% in 1987. After payment of all expenses for operations, including depreciation, 4.4 cents on the dollar was available for the return on capital. The operating ratio for Manitoba was higher than that for Canada, leaving only 2.5 cents on the dollar available as a return on capital invested. This is not a very satisfactory situation.

Table 4.5: Trucking Operating Ratios (%) - 1987

	Manitoba	Canada
Intercity	97.6	96.0
Local and off-highway	94.8	92.8
Total	97.5	95.6
Of which,		
Interprovincial	97.9	96.7

Source SC 53-222.

Table 4.6 shows categories of employment in the for-hire trucking industry.

Table 4.6: For-hire Trucking Employment by Categories - 1987

	Manitoba	Canada	Manitoba share-%
Drivers	4,121	59,872	6.9
Equipment maintenance	526	6,749	7.8
Terminal and platform	1,888	14,268	13.2
Sales and administration	1,339	20,115	6.7
Total (a)	8,116	102,178	7.9

(a) Includes small category of "other" workers and therefore the four individual categories do not add up to the totals.

Source: SC 53-222.

Companies with their head offices in Manitoba accounted for 7.9% of total employment. The Manitoba share is particularly high in terminal and platform operations and this probably reflects the large number of LTL (less than truckload) operations headquartered in Manitoba, as these are more labour intensive.

Average levels of compensation in the trucking industry were shown earlier in Table 4.2. The level of earnings for companies headquartered in Manitoba was 4.4% higher than for Canada as a whole, but this seems to be an unduly high differential compared to earlier years. In 1987, the average compensation of Manitoba based companies was third in Canada, exceeded only by the Yukon and Ontario.

The final table in this section shows pieces of trucking equipment owned and leased by motor carriers in Manitoba and Canada in 1987. As would be expected, the Manitoba share of straight trucks corresponds with its share of population, as this equipment is not used extensively in extraprovincial traffic. Ownership of tractors, trailers and other equipment is much higher in Manitoba.

Table 4.7: Numbers of Trucking Equipment - 1987

	Manitoba	Canada	Manitoba share-%
Straight trucks	770	19,373	4.0
Road tractors	2,657	37,964	7.0
Semi-trailers	9,030	96,436	9.4
Full trailers	410	4,807	8.5
Other	1,279	7,652	16.7
Total	14,146	166,232	8.5

Source: SC 53-222.

4.1.3 Intraprovincial Trucking

The study did not include any detailed work on intraprovincial trucking in Manitoba. UMTI has recently produced a lengthy report on this industry entitled "Impact of Regulatory Reform on the For-hire Trucking Industry Serving Rural Manitoba", with Dr. Barry E. Prentice as the project leader. A brief summary of the findings is given in this sub-section.

i) There are currently 84 intraprovincial trucking companies hauling general freight in Manitoba. This compares with 153 carriers, when a similar survey was carried out in 1972. The population of rural Manitoba is declining, while PSV carriers are faced with competition from couriers and buses in respect of small packages and from private carriage in respect of truckload shipments. The future for the industry is not very attractive.

ii) Rural-based manufacturers were asked to respond to questions regarding the importance of the local trucker to their community and business. Rural manufacturers appeared to feel that local truckers are important to their community and would like to see the service remain. Nevertheless, many do not use the local carrier, relying instead on private carriage.

iii) The evidence on the financial condition of the intraprovincial trucking industry was, rather surprisingly, inconclusive. The study commented that "some carriers are clearly in financial difficulty, while others of similar size appear to be prospering".

iv) Increased competition within the province over the past decade has had a negative economic impact on rural truckers. In addition, PSV carriers are at a disadvantage relative to private carriage from the standpoint of higher insurance rates. A further competitive disadvantage arises when livestock are conveyed to major marketing points in farm trucks using cheap "purple gas".

v) The study concluded that the operating authorities of some rural carriers were unduly restrictive and suggested several options for reform. These included the removal of maximum rate protection for shippers who used private carriage for a significant proportion of their transport needs; a phased in expansion of operating authorities; a complete and immediate deregulation of geographic limits on operating authorities; and deregulation with compensation for carriers wishing to leave the industry.

4.1.4 Private Trucking

The data considered earlier in this section did not include private trucking carried out by companies whose major activity is in another area. The material collected on private trucking by Statistics Canada covers firms that operated fifteen or more commercial vehicles and used dedicated drivers, leased drivers or broker operators. These firms had their main activity in other sectors of the economy including construction, manufacturing, government, wholesale and retail trade, mining, fishing and logging.

In 1987, 2,320 firms across Canada reported a private trucking activity, of which 79 or 3.4% were in Manitoba. A total of 84,166 employees were reported with 2,608, or 3.1% in Manitoba. The 1987 employment figure for Canada is equivalent to some 72% of employment in the for-hire trucking industry. Moreover, this could be an underestimate, because private trucking is more difficult to document than the for-hire industry.

The Manitoba share of private trucking is lower than the province's 4.1% share of Canadian population and this contrasts sharply with the important role of Manitoba in the for-hire trucking industry. Much of the private trucking industry is a function of other economic activity in an area and does not offer scope for export activity, such as that provided by the interprovincial for-hire trucking industry in Manitoba. However, some private trucking operates out-of-province and this raises the interesting speculation as to whether a switch from for-hire trucking to private trucking would adversely affect the overall level of trucking activity in Manitoba.

4.1.5 Bus Transport

Total employment in the Canadian bus industry was only 3,500 in 1989. On the basis of enquiries to the industry, Manitoba employment is approximately 500. Bus service is widely available throughout Manitoba, with the largest operators Grey Goose Bus Lines Manitoba Ltd., Greyhound Lines of Canada Ltd., and the Fehr group.

Grey Goose is the largest operator with services throughout rural Manitoba and to the north of the province as far as Gillam. The company is owned by Laidlaw Transportation, which became a subsidiary of Canadian Pacific in 1988. The Greyhound operation in Manitoba is a branch of the Canadian company headquartered in Calgary, which incidentally also owns Motor Coach Industries in the bus manufacturing sector. Greyhound provides the main line bus services from Winnipeg along the Trans Canada Highway and along the Yellowhead Highway. Winnipeg based drivers take the buses respectively to Dryden, Virden and Yorkton, waiting there to bring back return vehicles. Service from Winnipeg to the United States is provided by the U.S. Greyhound operator.

The Fehr group of companies includes the Beaver Bus Lines service to Selkirk, Eagle Bus Lines, Webb Bus Lines and Fehr-Way Tours and operates a total of 31 buses. There are also a number of smaller bus operators in Manitoba, but most of these appear to operate only one or two buses.

The bus industry, of course, provides not only passenger transport, but also freight distribution of package traffic. This function has been increasing in importance and is reviewed later under transport users in Chapter 9.

4.2 CONCERNS OF MANITOBA INTERPROVINCIAL MOTOR CARRIERS

Nine of the leading thirteen Canadian transcontinental motor carriers are headquartered in Manitoba. These are Arnold Brothers Transport Ltd., Atomic Transportation System Inc., Canadian Motorways Ltd., Imperial Roadways Ltd., Kleysen Transport Ltd., Paul's Hauling Ltd., Penner International Inc., Reimer Express Lines Ltd. and TransX Ltd. Prior to 1988, the Manitoba proportion was nine out of fifteen. Route Canada ceased to operate that year and Kingsway Transport was taken over by Winnipeg-based Canadian Motorways. Manitoba is missing four leading carriers - Alltrans Express Division of TNT Canada Inc., CP Express and Transport, Day and Ross Inc. and Trimac Transportation Services.

Of the Manitoba carriers, Canadian Motorways is the largest motor carrier in Canada and Reimer Express ranks #4. CP and Alltrans, ranked respectively #2 and #3, are both headquartered in Toronto. The headquarters for Trimac are in Calgary. Day and Ross developed from the Atlantic Region and are still headquartered in Hartland, New Brunswick.

Interviews took place with interprovincial and international motor carriers operating from Manitoba. Excellent cooperation was given and, in practically all cases, the visits included a tour of the terminal facilities. Visits were made to eight of the nine transcontinental motor carriers headquartered in Manitoba and to three of the four large transcontinental carriers not headquartered in the province; the two companies not visited responded generously to rather lengthy telephone inquiries.

Although not technically in the top thirteen carriers, interviews were also carried out with three other important Canadian motor carriers - George Smith Trucking of Winnipeg, South East Transport Systems of Steinbach, and the Winnipeg office of Porter Trucking Ltd., which is headquartered in Calgary. Finally, a visit was made to the Winnipeg office of the U.S. based Yellow Freight System Inc. and a telephone interview was carried out with the Winnipeg office of U.S. based Consolidated Freightways Corporation.

Section 4.2 gives a brief summary of the composition of the interprovincial and international motor carrier industry serving Manitoba; considers the reasons for location of so much of the industry in Manitoba; and outlines specific concerns expressed in the course of the interviews.

4.2.1 Composition of the Manitoba Interprovincial Motor Carrier Industry

For ease of discussion, the industry is divided into four categories; this division is, to some extent, artificial as very few carriers operate in only one of the categories identified. The discussion covers only the firms interviewed and not the entire interprovincial motor carrier industry.

(i) LTL Operators

Of the thirteen large carriers, seven have been assigned to the less-than-truckload (LTL) category. These are Motorways, Reimer, Atomic and Imperial, all headquartered in Winnipeg, and three carriers headquartered out of province, namely CP, Alltrans and Day and Ross. All these carriers also provide truckload service and are not exclusively LTL.

These seven carriers provided 2,200 jobs in Manitoba in 1989, excluding broker operators. The bulk of the employment - some 1,800 jobs - is provided by the firms headquartered in Winnipeg. The export earnings of these carriers is demonstrated, in that the proportion of mileage which they perform out of province ranges from 83% to 95%. This out of province mileage is predominantly interprovincial rather than international. International mileage varied among the companies surveyed from a low of 5% to a high of 15%.

(ii) Truckload Carriers

Three of the large thirteen carriers have been assigned to this category - TransX, Arnold and Penner - although these have LTL operations in addition. Three smaller companies were also visited - George Smith, South East and Porter. Apart from Porter, these companies are all headquartered in Manitoba.

The six companies supplied a total of 1,300 jobs in the province, with this number excluding broker operators. These carriers performed some 83% of their mileage out of province with at least half of this mileage in transborder operations. This heavy transborder activity in truckload traffic is in contrast with the overwhelmingly interprovincial business of the LTL carriers.

(iii) Bulk Carriers

Three of the thirteen large carriers are in this category - Paul's Hauling and Kleysen, headquartered in Manitoba, and Trimac, headquartered in Calgary. Again, this classification does not recognize the diversified nature of these companies. Kleysen also moves general freight and mail for Canada Post. Paul's Hauling is also diversified and its activities include Gardewine North, the major carrier to northern Manitoba.

To preserve confidentiality, a composite figure for employment in Manitoba is given for all three bulk carriers, excluding Gardewine. These companies provide some 1,000 jobs, excluding broker operators. For the Manitoba based companies, extraprovincial operations account for over 80% of mileage performed.

(iv) U.S. Carriers

As already indicated, the Winnipeg offices were contacted for two very large U.S. carriers, Consolidated Freightways and Yellow Freight System. The two operations are almost identical, consisting of a terminal and a sales office in Winnipeg and a line haul operation between Winnipeg and Minneapolis using U.S. domiciled drivers. Employment figures were provided, but these were not very large.

4.2.2 The Manitoba Location for Interprovincial Trucking

The establishment of the large inter-provincial carriers in Manitoba goes back to the 1950s. Winnipeg was the major rail transportation centre of Western Canada - as, indeed, it still is - and this formed a precedent as a location for the emerging trucking mode. Winnipeg was the natural place to break bulk and consolidate shipments for other Western Canadian destinations. The markets in Calgary and Edmonton, for example, were not then sufficiently large to absorb full truckload shipments of goods from Eastern Canada. In the technology of the 1950s, truck transport could not compete with rail over longer distances. Moreover, the Manitoba government had negotiated a considerable number of trucking reciprocity agreements with neighbouring states and provinces to avoid duplication of registration fees charged on trucks. This reinforced the locational advantages of the province.

The reasons advanced in the course of the UMTI interviews for the continued location of company headquarters in Manitoba were less strong. The geographical location in the centre of the country is helpful; this is convenient for operations, allows air transportation in no more than three hours to Vancouver, Toronto and Montreal, and facilitates communications in that Winnipeg is only one hour behind Toronto and Montreal and two hours ahead of Vancouver. Quality of labour is good in Manitoba and, apart from some complaints in respect of Workers Compensation, the work ethic is very much respected.

Nevertheless, several of the owners and managers of large Manitoba motor carriers interviewed in late 1988 were are not very satisfied with Manitoba as a location. One large carrier stated that the original advantages enjoyed by his firm had been eroded and that, aside from social reasons for staying, his headquarters should be in Calgary. A second carrier questioned whether social factors, such as proximity to family and friends, were sufficient reason for remaining with headquarters in Winnipeg. A third company could see little economic rationale for maintaining headquarters here and stated that sentimental reasons were the main explanation for not moving. A fourth carrier complained about lack of growth in the economy, operating revenues barely covering out-of-pocket expenses, and high taxes.

These pessimistic views were not expressed by every company, but the extent of unhappiness is a cause for concern. By origin, the leaders of Manitoba's interprovincial trucking industry are native Manitobans or successful immigrants with a love of the province. They have stronger roots in Manitoba than the leading executives of railways and airlines, who are often from outside the province, reflecting company policy of geographical rotation of staff. A major problem with the Manitoba motor carrier industry seems to be a feeling that the contribution to the province has not been appreciated by governments, regardless of political hue, or by the public at large. The researchers explained that the commissioning of the present study showed that the government was concerned; action recently taken on matters considered below in 4.2.3 is even stronger confirmation of this.

4.2.3 Specific Concerns

The major concerns raised in discussions with the interprovincial trucking industry are listed below with minor issues at the end of the sub-section.

(i) Taxation

Tax rates and burdens are addressed more fully in Chapter 10. Personal income tax rates are higher in Manitoba than in the other Western Provinces. This was mentioned in several of the interviews. Corporate tax rates are also higher in Manitoba. Surprisingly, this was not raised apart from one reference to corporate tax rates being much lower in the United States. Diesel fuel tax rates are higher in Manitoba than in Alberta and B.C., but lower than in Ontario and about the same as in Saskatchewan. The fuel tax issue was raised primarily in comparison with the United States. At least one trucker was routing traffic between Winnipeg and Eastern Canada via the United States to reduce fuel charges.

However, the taxation item raised most frequently was the payroll tax. Manitoba levies a payroll tax of 2.25% on payroll for companies above a certain minimum size and all the interprovincial trucking companies are well beyond this threshold. At the time of the interviews in November 1988, the only other jurisdiction in Canada to levy such a tax was Quebec, where the rate was even higher than in Manitoba. (As explained in Chapter 10, Ontario introduced a payroll tax effective January 1, 1990, but this was not known at the time of the interviews.)

The complaint of the Manitoba motor carriers was twofold, firstly in respect of the payroll tax itself and secondly that this was levied on trucking employees domiciled outside Manitoba if they were paid from a so called "permanent establishment" within this province. Effective December 1, 1988, the Manitoba Government introduced some relief for the trucking industry. Payroll tax is now assessed in respect of line haul personnel only on the proportion of their earnings attributable to mileage performed within Manitoba. In other words, if an interprovincial driver performs five-sixths of his mileage out of province, which is typical as shown earlier in the present chapter, then the payroll levy would only apply to one-sixth of his earnings.

This still leaves the interprovincial trucking industry obligated to pay payroll tax on its head office workers in Manitoba and in respect of mileage performed within the province. If a company were to relocate its headquarters to Alberta, this cost of doing business would disappear and this is no small consideration in a labour intensive industry such as trucking. This was brought forcibly to the attention of UMTI researchers by four of the companies headquartered in Manitoba and mentioned as a concern by most of the other enterprises. The problem is not unique to trucking and similar complaints were made in other transport modes and in the transport equipment manufacturing industries.

(ii) Workers Compensation Board

This was a cause of great complaint in 1988, with complaints raised by at least four trucking organizations. The problem was twofold - the rates of assessment and the payment of benefits.

Premiums for Workers Compensation are assessed on an industry basis, with the category "custom trucking" used for the commercial trucking industry. The 1988 premium for the employees of trucking companies was 6.5% on salaries up to $34,000 per annum and this covered the vast majority of earnings of trucking company employees. These rates were considered unduly high on four counts.

Firstly, the premium applied to a truck driver in "custom trucking" could be twice as high as that levied against a truck driver working for a retail store, whose category was dictated by retail distribution. Secondly, the 6.5% rate applied to all employees of a trucking company including office staff. Thus, an office employee of a "custom trucking" company could be assessed at 6.5%, while an office worker with an investment firm could be assessed a premium of less than 1.0%. Thirdly, there was no merit system for individual employers, which would allow safety records to be reflected in premiums. Thus, an employer who improved his work environment in terms of safety would not get any benefit for his efforts. Fourthly, it was claimed that premiums were higher in Manitoba than in other jurisdictions, with the specific claim that premiums in Alberta were approximately one-half of those in Manitoba.

Effective 1989, the Worker's Compensation Board has taken action to remedy some of these complaints. The same premium is still levied on all employees of a trucking company, but the Board has introduced "experience rating" whereby a company's premiums now more closely reflect its actual claim experience. This is now in effect, with a promise of further adjustments in each of the next four years.

As far as claims are concerned, several trucking companies expressed the view that it was too easy for employees to claim compensation and that the incentive to do so was increased as benefits were not subject to personal income tax in the hands of the recipient. However, it was beyond the terms of reference of the present study to examine the extent of this problem in Manitoba vis-a-vis other jurisdictions or in the trucking industry as against other industries.

(iii) Autopac

Before the changes made in 1989, Autopac insurance for the motor carrier industry was inflexible. In addition to a requirement to insure for accident benefits and for third party liability, trucks registered in Manitoba had also to be insured against damage to the truck itself with a minimum deductible of $650. This was extremely low and many fleet operators in the province would have preferred either to self-insure or have a much higher deductible. Consequently, many Manitoba interprovincial carriers had registered their linehaul trucks out of province, giving them freedom to take out insurance in private markets on the basis of an Alberta or an Ontario registration. Trucks operating in city pickup and delivery in Manitoba still had to be registered here, but the linehaul fleet was escaping the Autopac requirement for a high deductible.

With the changes brought into effect in 1989, this problem seems to have been diffused. Trucks operating extraprovincially and registered in Manitoba are now only required to have insurance for accident benefits. This covers injuries and deaths of employees operating the trucks and, on a no fault basis, other persons who may be injured or killed in accidents involving these trucks. All other insurance on extraprovincial trucks is exempt and can be bought either commercially or through Autopac, depending upon the wishes of the carrier. Trucks operating only within Manitoba are also required to have insurance for third party liability for damage claims, but insurance for damage to the truck itself is now entirely under the control of the carrier.

These changes have done much to answer the earlier complaints, but it is not yet clear whether this has meant that truck registrations of interprovincial vehicles are now being returned to the province. The matter is not of great importance, given that registration fees are pro-rated according to mileage performed in the various provinces, but registration in Manitoba would give some small boost to administrative employment.

(iv) Weights and Dimensions

In February, 1988, a Memorandum of Understanding was signed between the federal and provincial ministers of transport to approve standardization of weights and dimensions for heavy trucks used in inter-provincial traffic on designated routes. Among other provisions, this included an agreement to raise vehicle weight limits to standards established by the Roads and Transportation Association of Canada (RTAC) with maximum gross vehicle weights of 46,500 kg for semi-trailers, 53,500 kg for A train and C train configurations, and 62,500 kg for B train configurations. This is discussed further under highway transport regulation in Chapter 12.

The new RTAC limits in Manitoba are effectively confined to the Trans Canada Highway, the Yellowhead and Highway #75 to the United States. A full list of roads on which the new limits apply was published in The Manitoba Gazette of December 31, 1988 under the heading "RTAC Routes". Trucking companies would like to see these new weight limits extended elsewhere in the province, arguing that this would increase their competitiveness. There are also problems in the transport of bulk goods in the City of Winnipeg, which has not yet implemented the full RTAC standards on major truck routes through the city.

The Manitoba Department of Highways and Transportation is currently considering further extension of the RTAC limits to other highways within the province, particularly those serving northern Manitoba. The province points out that time and resources are needed to upgrade highway structures to accommodate higher vehicle weight limits. The jurisdictional authority of the City of Winnipeg to set weight limits independently of those set by the province is very unusual in Canada. However, it appears that the City may soon comply with the full RTAC standards.

(v) Deregulation

Several firms regretted the speed with which the interprovincial trucking industry was being deregulated. They expressed determination to continue to oppose applications for new authorities during the interim period preceding full deregulation at January 1, 1993. Nevertheless, there was a general acceptance that the regulatory changes currently underway were inevitable and desirable. Although some suggestions were made as to the need for compensation for deregulation of interprovincial trucking, this view was not widespread; if the interviews had taken place say in 1987 there would probably not have been such a mild reaction. One trucker complained that the speed of deregulation was far too slow and argued that a correct interpretation of deregulation would allow him "to haul anything, anytime, anywhere". As a general conclusion, the deregulation issue was frequently mentioned, but no longer seems to be a major preoccupation.

(vi) U.S. Competition

The problem of U.S. competition in the trucking industry was mentioned by only four of the firms interviewed. These were naturally the firms whose business had a large transborder component, but it is possible that the UMTI interview process was not properly geared to obtain comments on this subject by most of the large carriers. Competition from U.S. firms is feared because of lower tax rates, faster depreciation write-offs, lower fuel charges, restrictions on the ability of Canadian carriers to pick up U.S. loads, and generalized fears as to competition from very large organizations.

The advantages of a U.S. versus a Canadian location have already been examined by Price Waterhouse for the trucking industry and separately by Trimac Consulting Services and the Conference Board of Canada for the Federal Government. The disadvantages are real and they appear to add between one and two per cent to operating costs. Two firms stated that they can survive as long as the Canadian dollar is so much below the U.S. dollar, with one of these firms suggesting that life would be very difficult if the Canadian dollar became higher than U.S. 87 cents. While UMTI has not examined this specific figure, it is clear that a stronger Canadian dollar causes problems for the transborder carriers.

(vii) Other Concerns

This final category covers miscellaneous concerns, each of which was raised by only one company visited. The need was expressed for four-lane highways on the Trans Canada and on Highway 75 from Winnipeg to Pembina. Manitoba has a greater proportion of the Trans Canada Highway as four-lane than any other province and the government has recently taken action to accelerate the provision of four lanes on Highway 75. Obviously, this is of extreme importance to the trucking industry. Perhaps the issue was not raised more frequently because of implicit recognition that government was listening and taking action.

Complaints on property taxes in Winnipeg were raised by one trucker and complaints on piggy-back rates by another. As these concerns did not appear to be general, they were not pursued further in the present study.

Finally, one very positive comment should be made. Although several companies pointed out the economies from using owner operators and from using non-union workers, no complaints were voiced as to the quality and productivity of labour in the trucking industry or the actions of trade unions.

4.3 ORGANIZED LABOUR AND THE MANITOBA MOTOR CARRIER INDUSTRY

Interviews took place with the three unions who organize employees in the trucking industry in Manitoba. The largest of these is the Teamsters Union Local #979 with a Manitoba membership averaging approximately 2,000. The list of major companies covered by this union includes Alltrans, Imperial, Kingsway, Kleysen, Motorways, Penner, George Smith, Tri-line and the Reimer city drivers.

The Canadian Brotherhood of Railway, Transport and General Workers (CBRTGW) has its main membership in the railway industry. This union also covers approximately 400 workers in the Manitoba trucking industry, including Porter and the Reimer highway drivers, together with some 150 Grey Goose bus drivers. The third union, the Transportation and Communications Union (TCU), organizes only CP workers in the trucking industry and these number somewhat less than 200 in Manitoba. A number of trucking companies in Manitoba are not unionized, but the companies named above may not constitute a complete list of the major carriers which are unionized.

The main concerns raised by the union representatives are now considered.

(i) Non-union Trucking Companies

Understandably, no union likes non-union shops. The reasons are the same in the trucking industry as in any other area of economic activity. The unions argue that employees of non-unionized firms earn less than union members and that existence of non-union shops weakens the bargaining power of the unions.

(ii) Broker Operators

The three unions disliked this concept in principle. In the words of one union representative, "no union likes contracting out". Broker operators are normally union members, if they work for unionized firms, but they are not necessarily in the same local as employee drivers and dues may be paid directly to the head office rather than locally. Each of the three unions felt that owner operators work under unnecessarily difficult conditions without the benefits and job security afforded to regular employees. The union attitude was not so much one of hostility, but rather a belief that, with greater support from owner operators, the unions could negotiate better conditions for them.

(iii) Deregulation and Free Trade

The unions were all concerned at the changes which could follow transport deregulation and the Canada-United States Trade Agreement. Following the U.S. deregulation, membership in the Teamsters Union fell from 2.2 million to 1.7 million and concern was expressed in Canada over the growth of non-union trucking firms. As a result of a switch from east-west to north-south trading patterns, there would be need to retrain and relocate present employees. The competition of huge U.S. trucking companies was feared. The unions were very aware of the operations of Consolidated Freightways and Yellow Freight

System and that they were maintaining terminal operations which "do not provide the same job opportunities as head office and regional offices".

(iv) Employee Benefits

The unions were concerned that the employee benefits of unionized workers were not enjoyed by broker operators and the employees of non-unionized firms. Pensions indexed for price inflation were a major objective of the unions, but this is not unique to the trucking industry.

(v) Highway Safety

This was only mentioned by one of the three unions contacted. This union advocated expanding the role of weigh scales to include checking hours of work and other safety factors. This is currently being addressed as part of the National Safety Code.

Although the unions voiced the concerns listed above, the general impression of the meetings was not one of great antagonism towards the carriers. One union representative thought that many carriers were happy to pay union wages and benefits to attract the better drivers. Union membership was showing stability to slight growth, although the union representatives feared that growth could be greater in non-union shops.

4.4 MANITOBA HIGHWAYS

Many transport specialists in Canada are becoming increasingly concerned over the deteriorating state of the nation's roads. A recent study by the Roads and Transportation Association of Canada (RTAC) was summarized in a paper given by Brian Hicks, the RTAC Manager of Technical Programs, at the May, 1988 Meeting of the Canadian Transportation Research Forum and published in the Proceedings of this meeting.

Over the decade 1975/76 to 1984/85, the RTAC study found that expenditures on roads in Canada, excluding new construction, fell some 10% short of the maintenance figure required to keep the roads in adequate condition. To quote from Mr. Hicks, "If maintenance is not adequate, or resurfacing not carried out when needed, the road deteriorates more quickly and reconstruction is required sooner. Experience has shown that this is a more costly program and the annual expenditure needs will rise significantly" (p. 533). The situation has become even more critical in recent years and the shortfall between actual expenditures and needs averaged 20% in the last three years of the time period surveyed by RTAC.

The major conclusions of Mr. Hicks' study appear at page 535 of the Conference Proceedings and are reproduced as follows.

> 1. There are very major shortfalls in the funds provided to preserve Canada's roadway system.
>
> 2. It must be made clear that these shortfalls cannot be corrected by a one time funding increase. These are shortfalls in annual budgets for maintenance and resurfacing purposes.
>
> 3. The implications of these shortfalls are serious. Inadequately preserved roads quickly deteriorate. Surface conditions become uncomfortable to drive and speeds reduce. The process is exponential, because rough surfaces cause significantly increased loading to the roadway structure, hastening deterioration. Ultimately, the road surface becomes impassable.
>
> 4. The impact is not only one of discomfort and inconvenience to the driver. Such a reduction of mobility has tremendous economic and social impacts.
>
> 5. Studies to develop optimum pavement management practices have clearly shown that delay in appropriate maintenance or resurfacing ultimately causes increased expenditures. At the extreme, frequent reconstruction is far more costly than implementing an appropriate maintenance program.
>
> 6. The technology is available to preserve our system, but adequate funding has not been provided to do so.

The RTAC paper related to Canada as a whole. Confidentiality prevented the release of individual figures for Manitoba, but the problem of inadequate maintenance expenditures is common across Canada. In a verbal comment, not included in the text of his paper, Mr. Hicks stated that road expenditures had fallen from 2.4% of Gross Domestic Product in 1975 to only 1.2% in 1985. This is clearly becoming a grave national problem.

Turning to the published Estimates of the Manitoba Government, the expenditure approved for highway maintenance in the 1989/90 budget was $55 million. Although this was a modest increase on the previous year, the budget for highway maintenance has shown very little change, even in current dollar terms, since 1984/85. Consequently the Manitoba Department of Highways and Transportation estimates that 60% of surfaced and gravel roads are being held to original standards, that 31% are now between 25 and 30% below standard, that 3% are below 50% of standard, and that maintenance has virtually stopped on the remaining 5% of the system.

The Highway Construction Program for the Province of Manitoba had a budget allocation of $102 million in 1989/90. This represented a substantial increase over the low of $83 million in 1986/87. However, in 1982/83 the budget was $100 million and, allowing for inflation, this was substantially more in real terms than the present budget. The Department estimates that approximately one-third of the Provincial Trunk Highway System pavements are deficient and in need of rehabilitation or resurfacing. The average age of the existing paved surfaces is approaching 15 years and the system on average is now nearing the last quarter of its useful service life of 20 years.

The Department has taken many initiatives to stretch its diminishing supply of dollars including an enhanced sealcoat program to extend the life of asphalt pavement; a thin asphalt overlay program on a number of roads, especially those subject to severe spring restrictions; and a major dust treatment program for gravel roads where surfacing will likely be deferred for many years.

On the basis of the material provided by RTAC and by the Manitoba Department of Highways and Transportation, it is not possible to determine whether the highways in Manitoba have suffered more or less than those in Canada as a whole. In Chapter 9, accounts are given of UMTI visits with the Regional Development Corporations serving rural Manitoba. There were complaints in respect of Highways #3 and #6, but these visits did not really produce a barrage of protests.

Following the initial studies by RTAC, the Canadian Council of Ministers responsible for Transportation and Highway Safety established a Steering Committee of officials to develop a National Highway Policy for Canada. Representation on the Council consists of the Federal Minister and all Provincial Ministers. Phase 1 of the Steering Committee Report was released in October 1988 and this identified "the current national highway system" and the standards to be achieved "concerning minimum design, condition and serviceability". Areas of current deficiencies were identified. The remaining phases of the study consist of an economic evaluation of the benefits and costs of the national highway system; funding alternatives; and policy options. The final report is to be completed by September 1990.

Although not stated explicitly, one objective of this exercise is to achieve a federal input of funds into the National Highway System. However, given federal budget constraints, the prospects for any substantial federal input do not seem likely on an immediate basis. The Steering Committee document shows Manitoba with 3.5% of the mileage of the National Highway System against a 4.1% share of Canadian population. Although the method of determining the distribution of funding has not yet been decided, this is not likely to be on a purely mileage basis and would incorporate other factors such as usage.

Before leaving highways, there is the further issue in the prairies of the effects of branchline abandonment on road costs. Although some studies have suggested that this has been slight to date, this is still a matter of keen debate. Moreover, in the past, many of the branchlines abandoned have been flanked by alternative rail service or have been short stub-end lines. Future abandonments are likely to involve substantially increased distances to haul grain to alternative elevators, with greater potential for road damage. The Manitoba government has taken the position that there should be compensation from the federal government for all parties negatively affected by branchline abandonment. The economies from abandonment are often substantial and would liberate large funds to allow such compensation.

4.5 PROSPECTS AND CONCERNS

This section starts with a summary of Chapter 4. Prospects and concerns are then addressed.

1. The motor carrier industry employed 7,400 people domiciled in Manitoba in 1989. In addition, there were some 1,700 broker operators in the province, thus providing a total of 9,100 jobs.

2. Manitoba had a 6.7% share of Canada's trucking jobs in 1989, against our 4.1% share of Canadian population. The "export" trucking employment from serving markets outside Manitoba can be obtained from the calculation 6.7% - 4.1% = 2.6%. When this is applied to the total number of 136,000 trucking employees and broker operators in Canada, this gives an export related employment in Manitoba of 3,600 jobs.

3. Motor carrier firms headquartered in Manitoba account for 8.6% of Canada's total operating revenues from trucking. Manitoba's share of the intraprovincial business is only 4.0%, comparable to its share of Canadian population. The situation is not much better in international traffic, where Manitoba generates 5.4% of operating revenues.

4. In interprovincial traffic, companies headquartered in Manitoba generate 21.0% of total Canadian revenues. Of the thirteen largest interprovincial trucking companies in Canada, nine are headquartered in Manitoba. The Manitoba share of the interprovincial trucking business has increased over the last decade.

5. The operating ratio for the trucking industry in Canada was 95.6% in 1987. This ratio expresses total operating expenses as a percentage of total operating revenues. After payment of all expenses for operations, including depreciation, only 4.4 cents on the dollar was available for the return on capital. The position was worse than this in Manitoba, where the operating ratio was 97.5%. Profits have become difficult to earn in the trucking industry.

6. The intraprovincial trucking industry is not surveyed in the present study, as this was examined in a recent UMTI report entitled "Impact of Regulatory Reform on the For-hire Trucking Industry Serving Rural Manitoba". Prospects for the intraprovincial trucking industry are not very promising.

7. Increased private trucking has had considerable effect on the for-hire trucking industry. The official statistics suggest that private trucking is some 72% of the size of the for-hire trucking industry, but this could be an underestimate.

8. In the early 1950s, when most of the interprovincial carriers were established in Manitoba, the province had a considerable number of locational advantages. These have become less important over the years. In interviews conducted in late 1988, several leading companies expressed dissatisfaction with the Manitoba location. In addition to specific problems discussed below, there was a feeling that the government and the community had not recognized the important economic contribution of the trucking industry to the province.

9. The motor carrier industry raised several specific concerns:

(i) taxation, especially the payroll tax;

(ii) Workers Compensation Board, especially that until very recently an employer received no recognition for a successful safety record in the premiums he had to pay;

(iii) Autopac premiums, specifically the low deductible which trucking companies were compelled to pay until very recently;

(iv) the need to extend RTAC standards on weights and dimensions to highways not presently covered;

(v) deregulation, with some complaining that this was proceeding too quickly and others that it was proceeding too slowly;

(vi) U.S. competition aided by lower tax rates, faster depreciation write-offs, lower fuel charges and restrictions on the ability of Canadian carriers to pick up U.S. loads.

10. Interviews with trucking companies and with trade unions suggested that labour relations in the Manitoba trucking industry were generally good. The main union concerns related to non-union trucking companies; broker operators who do not receive employee benefits; and the effects of deregulation and free trade on job opportunities.

11. Maintenance expenditures on highways have been inadequate throughout Canada and the United States for over ten years and the situation is now becoming critical. Data provided by the Manitoba Department of Highways and Transportation confirmed the problem here. Provincial highway officials have joined with Transport Canada in identifying a National Highway System for Canada. However, in view of federal budgetary difficulties, prospects for federal funding are not promising for the next few years.

12. Together with the other prairie provinces, Manitoba has the problem of increasing road costs resulting from railway branchline abandonment. Although some studies have

suggested that the additional costs have been slight to date, this is still a matter of keen debate. The savings from branchline abandonment are very substantial and would free enough resources to allow adequate compensation for increased road costs.

Looking to the next few years, there is likely to be continued concentration in the Canadian trucking industry, as this has been the normal result of deregulation in transport modes in both the United States and Canada. A period of rapid change presents opportunities as well as dangers. The provincial government has taken impressive action along a broad range of fronts over the last year - payroll tax, Workers Compensation, Autopac and highway expenditures. This constructive approach must continue to enable Manitoba to consolidate its position in a deregulated trucking industry.

There is also the growing problem of U.S. competition. As free trade leads to some replacement of east-west movements in Canada by north-south movements, the Manitoba trucking industry will suffer from its low share of Canada's international trucking business. Winnipeg is in the geographical centre of Canada for east-west movements across the country, but only a modest amount of transborder traffic originates in or is destined for Manitoba. Moreover, the competition of U.S. trucking operations is formidable, aided by a more generous tax structure, lower fuel prices and the impressive size and strength of major U.S. trucking operations.

The following recommendations are made to the various levels of government.

1. The federal government should:

(a) ensure that federal taxes do not penalize the Canadian trucking industry vis-a-vis U.S. carriers, with specific reference to corporate taxation, depreciation allowances and fuel taxes;

(b) make a financial contribution to the National Highway System, which has recently been identified by the Roads and Transportation Association of Canada (RTAC) and adopted by the Council of Ministers Responsible for Transportation and Highway Safety;

(c) compensate the losers from the abandonment of grain dependent railway branchlines, including the road authorities whose costs are increased, in the same way as provisions are contained for other branchlines under section 175 of the National Transportation Act.

2. The provincial government should:

(a) recognize, within the budgetary constraints of the province, that the payroll tax is particularly resented and that this tax on headquarters operations of interprovincial motor carriers increases the cost of doing business in Manitoba;

(b) extend RTAC limits on weights and dimensions to other highways in the province, as roads and structures are upgraded;

(c) take a pro-active role to ensure that Manitoba's participation in the motor carrier industry is not adversely affected by the consolidation of carriers expected to result from deregulation;

(d) ensure adequate expenditures on highway maintenance and construction in Manitoba, continuing to give high priority to providing four lanes on Highway #75 between Winnipeg and the U.S. boundary;

(e) continue the Manitoba initiative of a joint provincial endeavour to obtain federal funding for the National Highway System;

(f) continue to press the federal government for compensation in respect of increased highway costs caused by branchline abandonment;

(g) develop a rationalization plan for the intraprovincial trucking industry.

3. The City of Winnipeg should:

(a) comply with the new RTAC standards on the main truck routes within the city.

The final paragraphs of this chapter contain some general suggestions to motor carriers, trade unions and motor transport users.

The motor carrier industry has needed to pay more attention to its public image and to making sure that the community understands the important economic contribution it makes. The successful responses obtained from government in the last year suggest that the industry is now succeeding in explaining its problems and obtaining redress.

There is evidence that trade unions are appreciative of the realities of competitive markets, recognizing the job loss that could follow successful penetration of the Canadian market by U.S. carriers. However, the traditional labour concern with "good jobs and good wages" is a legitimate objective of all economic activity.

Transport users are surveyed at length in Chapters 7 to 9, when it will be shown that there is general satisfaction with the quality of motor carrier transport. Shippers have been enjoying very competitive truck freight rates in the last few years; operating ratios and the profitability of trucking companies have suffered; it should be pointed out that very low freight rates cannot be expected to continue forever.

CHAPTER 5: THE RAILWAY TRANSPORT INDUSTRY

This chapter reviews the railway transport mode in Manitoba. The chapter starts with a statistical review of employment and a description of the roles of CN Rail, CP Rail and VIA Rail. The second section discusses the concerns of railway carriers in respect of their operations in the province. The views of labour are then considered. The chapter closes with a summary and general review of prospects and concerns relating to railway transport in Manitoba.

5.1 THE MANITOBA RAILWAY INDUSTRY

Although high quality statistics are available on a national basis for the railway transport industry, published figures on a provincial basis are sparse. Consequently, the discussion in this section is generally limited to employment, as it was not possible to produce a provincial breakdown of operating statistics, comparable to that given for the highway transport industry in Chapter 4.

5.1.1 Employment in the Railway Industry

Employment in the railway industry in Canada and in Manitoba is shown in Table 5.1. Class I railways are CN Rail, CP Rail and VIA Rail and these account for 90% of total railway employment. Other railways include British Columbia Railways, Ontario Northland, Algoma Central and the Quebec North Shore and Labrador. Data for Class I and total Canadian railway employment have been extracted to the year 1987 from SC 52-216 and its predecessor publications; these are the most reliable figures, but are not yet available beyond 1987. Figures for the lastest two years are taken from SC 72-002, but this source appears to underestimate employment by about 3%. The compilation of data for Manitoba is more difficult, as there are now no published figures. From 1982 to 1989, Manitoba data were provided by the railways to UMTI.

VIA Rail did not exist prior to 1978, but this does not cause a statistical problem, as passenger train workers now employed by VIA were included in CN and CP figures in the earlier years. There are, however, other problems in the coverage of statistics of railway employment. In the early years, the figures included employees of railway companies operating in non-rail activities, such as truck transport. Statistical re-classification has exaggerated the fall in railway employment in the 1960s and the particularly sharp decline between 1981 and 1982 is due to re-classification resulting from government revision to the Uniform Classification of Accounts.

Table 5.1: Employment in Railway Transport

	Canada Class I	Canada Total	Manitoba Total	Manitoba Share - %
1961	127,500	137,200	16,600	12.1
1971	105,000	114,900	15,900	13.8
1976	99,300	110,100	14,500	13.2
1981	98,000	108,000	n/a	n/a
1982	86,500	95,700	12,500	13.1
1983	84,300	92,800	12,400	13.4
1984	85,400	93,600	11,700	12.5
1985	83,300	91,300	11,400	12.5
1986	77,000	84,800	10,800	12.7
1987	74,300	82,200	10,200	12.4
1988	n/a	76,700	9,800	12.8
1989	n/a	73,500	9,700	13.2

Source: Canada Class I and Canada Total from SC 52-212, SC 52-215 and SC 52-216 for 1961-1987. Canada Total for 1988-1989 and Manitoba Total for 1961-1976 from SC 72-002. Canada Total for 1989 is the latest available full year estimate, i.e. November 1988/October 1989. Manitoba Total for 1982-1989 from figures provided by railways to UMTI.

Railway employment is shown at 73,500 in 1989. Allowing for statistical re-classifications since 1961, the true comparison of this figure should be with an employment of the order of 120,000 in 1961. This means that the number of railway jobs has fallen by 46,500 since 1961 - in other words, almost two out of five railway jobs have disappeared. The fall in railway employment has been particularly marked in the 1980s and this can be expected to continue for at least the next decade. This is the inevitable result of technological advances in railway operations, increased competition from a deregulated trucking industry, and the downsizing of rail passenger services.

Manitoba has been fortunate in its large share of Canadian railway employment. The 1989 share of 13.2% compares with a 4.1% share of Canadian population. As indicated in Chapter 2, earnings in the rail mode are higher than any other major transport mode and, as wage scales are negotiated on a national basis without regional variations, Manitoba also enjoys these high earnings. Railway jobs pay well and Manitoba has enjoyed a large share of this employment.

The downside is that employment in the rail mode is declining and there does not seem to be any way of changing this. From Table 5.1, Manitoba had 9,700 railway jobs in 1989 and, adjusting for differences in statistical coverage already described for Canada as a whole, the province has lost about 5,000 railway jobs since 1961. More than half this loss appears to have occurred in the 1980s although Manitoba has not suffered any loss in share over the decade.

The status of Winnipeg in the administrative hierarchy of the railways has declined. CN continues to maintain the Prairie Region headquartered in Winnipeg and covering the area from Thunder Bay to the Saskatchewan/Alberta border, but this region now has some reporting functions to Edmonton. CP has opted for a two region administrative structure, with western headquarters in Vancouver. Both railways state that these administrative changes have had little effect on employment in Winnipeg - this may be so, but the present UMTI study could not make an in-depth analysis of this. On the positive side, Winnipeg is a major equipment overhaul location for both freight railways and this employment has been centralized here in recent years.

5.1.2 CN Rail

The employment of CN Rail is shown in the following table for 1983 and 1988. System data are not yet available for 1989, but Manitoba employment was only slightly below 1988, with a reduction of less than 100 jobs. The detailed description below for 1988 can therefore be regarded as still current.

Table 5.2: Employment - CN Rail

	1983	1988	% change	Manitoba % share - 1988
Manitoba	7,500	6,300	-16	
Western Canada	20,000	16,200	-19	39
Canada	51,500	38,700	-25	16

CN employment in Canada declined by 25% between 1983 and 1988. This was a larger decline than the 17% figure recorded for railway employment as a whole. In addition to economizing very substantially on labour utilization, CN was also transferring considerable numbers of staff to VIA Rail over this time period.

The decline in CN employment in Manitoba was 16%, appreciably less than in the country as a whole. Nearly two-fifths of CN employees in Western Canada are located in Manitoba, with Western Canada defined as all CN operations west of Thunder Bay/Armstrong. Nationally, Manitoba accounted for 16% of CN employment.

As in so many of the transport activities of Manitoba, the Winnipeg location is predominant for CN Rail. In 1988, some 5,100 workers were located in the city, with 1,200 elsewhere in the province. In addition to Winnipeg, train crews work out of Dauphin, The Pas and Gillam and running repairs are carried out at The Pas. Track maintenance people are, of course, located to access all CN lines throughout the province. CN also has a major training facility for locomotive engineers at Gimli.

The transportation function at Symington Yard provided some 1,900 jobs in 1988. Of these, 1,100 jobs related to train operations, mainly train and engine crews, but also dispatchers and some 60 workers in the Customer Service Centre which serves the whole of Manitoba. Train crews using Winnipeg as their home base serve as far as Rivers in Manitoba and Sioux Lookout and Rainy River in Ontario. Although crews stationed in Sioux Lookout may occasionally run trains to Winnipeg, this is not a common arrangement and Winnipeg crews are therefore serving a substantial area. In the immediate future, no extension in the area served from Winnipeg is envisaged. Employees in equipment maintenance numbered some 800 at Symington Yard. Like most work on the railways, this employment is contracting.

The remaining 3,200 CN employment in 1988 consisted of 500 jobs associated with the administrative office in Winnipeg and some 2,700 jobs in Transcona. The administrative office relates to the whole prairie region and also includes grain marketing headquarters for the whole of Canada. The Transcona employment is mainly in the Transcona Shops, but also includes rail materials, purchasing and stores, and work equipment.

The Transcona Shops are extremely important to the economy of Manitoba, employing 2,200 workers in 1988. They are the only major CN backshopping facilities for rail cars and locomotives for the whole of Canada. Making a slightly arbitrary distribution of the Maintenance Division in the Transcona Shops between cars and locomotives, roughly half the employment there is on cars and half on locomotives. CN has already centralized all its major backshop activities in Transcona and Manitoba has been very fortunate in this regard. Running repairs are carried out in Winnipeg and the nearest alternative locations for this work are Thunder Bay, The Pas and Saskatoon. As the major equipment repair functions are already centralized in Transcona, there is no prospect of Manitoba gaining much in the way of further jobs in this activity. Indeed, with technological improvements in the quality of rail equipment and maintenance practices, employment will decline over the next decade.

Transcona is also the only CN facility in Canada producing continuous welded rail, railway frogs and related track equipment. The sorting of rail for relay programs is shared by Transcona and Belleville, Ontario, but Transcona is the more important location. Transcona employment in welded rail, frogs and other track equipment was just under 200 in 1988; while this can fluctuate, particularly with variations in branchline abandonment activity, there are no opportunities for any long-term increase. The purchasing function for the Prairie Region and track stores for the whole of Western Canada are also located in Transcona, providing just under 200 jobs with the majority of these dependent upon railway work undertaken outside Manitoba. Finally, CN has its work equipment function for the Prairie Region located in Transcona. This provides in excess of 100 jobs and many of these depend upon work outside the province.

As a rough summary, of the 6,300 CN jobs in Manitoba in 1988, 2,600 are serving the overall CN system and probably another 1,000 the requirements of Western Canada outside the province. These estimates are probably low, as they still leave a balance of 2,700 jobs. This would amount to 6.6% of total CN employment and it would be difficult to see that this number would be necessary just to serve traffic originating in, destined for or passing through Manitoba. However, it is not necessary to pursue this arithmetic any further, as it is quite clear that CN employment located in Manitoba depends very substantially on the fact that CN has chosen to put so many national functions here.

5.1.3 CP Rail

The table below shows CP Rail employment in 1989, together with comparable figures for 1983. The figures for 1983 are UMTI interpolations, as the request for detailed data made to CP was for 1981 and 1984. The figures for 1989 are provisional, but they show negligible change from detailed figures provided for 1988. CP has warned that the breakdown of employment for Western Canada is less accurate than the other figures.

Table 5.3: Employment - CP Rail

	1983	1989	% change	Manitoba share - %
Manitoba	4,500	2,900	-36	
Western Canada	16,100	12,400	-23	23
Canada	31,100	23,700	-24	12

Employment in CP Rail declined by 24% in Canada between the years 1983 and 1989. The decline in Manitoba was considerably greater than this and the province has fared less well in keeping CP employment than it has in the case of CN.

In 1989, CP averaged some 2,900 employees in Manitoba. Some 400 CP employees are located outside Winnipeg, consisting of train crews operating from the Brandon and Minnedosa terminals, track workers on CP lines, and other functions still carried out in Brandon. The proportion of CP workers located outside Winnipeg is smaller than for CN. Although both railways operate main lines and grain-gathering branchline systems, CN also services the north and this accounts for the larger proportion of workers located outside Winnipeg.

Of the 2,500 CP workers located in Winnipeg in 1989, over 1,000 were employed in the operation of trains. This function is defined in a wide transportation sense; it covers all

Winnipeg Division employees, except those located outside the city and includes some 200 employees in the diesel shops working on locomotive running repairs. CP has centralized heavy car work for the system in Winnipeg and Calgary, with intermodal work mainly in Montreal, and the Weston Shops provided employment in excess of 800. The heavy locomotive maintenance work is mainly in Calgary and the Winnipeg activities are confined to running repairs.

Like CN, CP has also centralized work on continuous welded rail and other track material in Winnipeg, but employment is fairly modest of the order of 150. This left over 500 CP rail jobs in Winnipeg in other functions, including general administration, the CP Grain Team, stores, track materials and maintenance of way. In 1989, 1,000 CP jobs in Winnipeg were related to work on cars and rail for the system as a whole. Of the remaining jobs in the Winnipeg Division and headquarters, perhaps 500 were not tied to Manitoba operations.

Returning to Table 5.3, Manitoba had 12% of CP Rail's total Canadian employment in 1989. This is a very substantial contribution to the Manitoba economy, but it is still four percentage points lower than for CN, equivalent to some 900 CP jobs. The explanation is that CN has centralized heavy car and locomotive maintenance in Winnipeg, while CP is still much less centralized.

5.1.4 **VIA Rail**

Employment figures for VIA Rail are given in Table 5.4. Data are not yet available for 1989, but are expected to show little change from 1988; the cutbacks in VIA Rail services did not take effect until January, 1990.

Table 5.4: Employment - VIA Rail

	1983	1988	% change	Manitoba % share - 1988
Manitoba	n/a	580	n/a	
Western Canada	n/a	1,320	n/a	44
Canada	3,500	6,900	97	8

VIA Rail employment almost doubled between 1983 and 1988. However, this mainly reflected the taking over of functions previously performed for VIA by CN and CP. These included equipment maintenance, station operations and the former CN train crews. Negotiations to absorb CP train crews were never completed and these remained CP employees.

VIA Rail employment in Manitoba numbered 580 in 1988, of whom 80 were in Brandon and the north and the rest in Winnipeg. Of these employees, 200 worked on equipment maintenance and cleaning, 270 on customer services, mainly the on-board train services in dining and sleeping cars, 50 on transportation in the actual operation of trains, and 60 in administrative functions, which often related to the whole of Western Canada. Winnipeg was the only home base for on-board staff in dining and sleeping cars between Toronto/Montreal and Vancouver. Nevertheless, VIA Rail employment was predominantly in Eastern Canada. Although Manitoba had 44% of Via employees located in Western Canada from Thunder Bay to Vancouver Island, this amounted to only 8% of VIA's national employment.

On October 4, 1989, Transport Minister Benoit Bouchard announced cuts in VIA services which took effect on January 15, 1990. Transcontinental service from Toronto to Vancouver was cut to three trains a week, with these routed through Edmonton. Remote services were retained, but the Minister has stated that over the next year he will be examining options for more cost-effective means of transportation for isolated communities.

Three of Canada's eight remote services are in Manitoba: Winnipeg-Churchill and The Pas-Lynn Lake, each at three trips a week, and the once weekly Wabowden-Churchill service. The final effect of the cuts in VIA Rail services on Manitoba employment has not yet been determined, but at least 200 VIA Rail jobs have been lost in Manitoba.

5.2 THE CONCERNS OF RAILWAY CARRIERS

This section reviews concerns expressed in UMTI interviews under four headings -taxes, the erosion of rail volumes in the face of highway competition, railway attitudes to prospective changes in the Western Grain Transportation Act, and CN service to Northern Manitoba.

5.2.1 Taxes

As in many of the interviews undertaken in the present study, high rates of taxation in Manitoba were frequently raised. The payroll tax came in for the same criticism as that given by the trucking industry in Chapter 4. Many railway activities, particularly the heavy repair of cars and locomotives, are not necessarily tied to Manitoba and the payroll tax increases the cost of doing business in the province. Concerns in respect of Workers Compensation were also expressed, both in respect of the level of contributions required and the claim that workers were allowed to qualify for benefits too easily, sometimes in respect of very minor injuries. This was also a complaint in the trucking industry, but the present study does not contain any analysis of the ease or otherwise of obtaining benefits in Manitoba as against other jurisdictions.

In addition to these general complaints, two specific issues were raised by both railways in connection with fuel tax and property tax. CP Rail expressed the issues very clearly in an early 1989 submission to the Manitoba Government and the descriptive paragraphs below are largely taken from this document.

The federal sales and excise tax on diesel fuel is 6.6 cents per litre. Provinces charge additional tax varying from zero to 15 cents per litre, with the provincial tax in Manitoba currently at 13.6 cents. The railway carriers argue that they have to cover their own infrastructure costs, unlike the situation on the highways, and that fuel taxes on railway operations are inequitable and foster inefficient use of surface transportation. As a result of this taxation, Canadian rail carriers pay approximately 60% more for fuel than U.S. rail carriers.

Turning to property tax, it is claimed that Manitoba is the highest of the three prairie provinces and that the tax on the railway right-of-way gives an unfair advantage to the trucking industry, which pays no property tax on the public highway. A new assessment system is currently being developed in Manitoba which would vastly increase assessments on railway right-of-way. Assessment would be applied on the reproduction cost value of the right-of-way, substantially overstating the effective market value of the asset and failing to recognize that the railways are not allowed to abandon low density grain lines on their own initiative.

These CP comments on fuel taxes and property taxes have also been advanced by CN Rail. Redress has been sought on the grounds of equity in that the tax situation prevents fair competition between railway and highway. No remedial action has yet been taken.

5.2.2 Erosion of Rail Volumes

Both major railways are concerned about the erosion of rail volumes in the face of truck competition. The railways provide their own infrastructure, while the trucks use public highways. The railways argue that there is inadequate recovery of user charges for highway use from the trucking industry and that the problem is worsened by additional charges on the railways, such as the diesel fuel tax and property taxes on the right-of-way described in the previous sub-section. The railways stress the need for fairness in competition and the requirement for an objective study of the contributions to infrastructure costs made by the highway carrier industry.

The railways are very aware of the problem of erosion of volumes. As will be shown in Chapter 9, grain now accounts for as much as 72% of total railway shipments originating in Manitoba. Although a considerable number of manufacturing industries still use rail both for inbound and outbound transport, there has been a reduction in the number of private tracks in Winnipeg. Shippers are not interested in using team tracks because service is often better through integrated intermodal transport. Many new manufacturing industries are being established without access to rail and there is a real danger that rail transport will have become insignificant even for present users by the end of the century.

5.2.3 Western Grain Transportation Act

Possible changes in the Western Grain Transportation Act (WGTA) to a "pay the producer" basis will be discussed later in Chapter 10. The railways have always claimed to be neutral on this issue and this continues to be their position. Nevertheless, they are obviously aware that the "pay the producer" option could reduce rail transport volumes, both as a result of increased feeding of grain to livestock in the prairies and diversion of export movements to the highway.

The general view of the railways is that truck transport will be more of a challenge on the movement of grain to Thunder Bay than on the movement to Vancouver. This reflects the shorter distance to Thunder Bay, the greater availability of elevator capacity, the lack of bottlenecks in the approach compared to Vancouver, and the difficulties for trucks in obtaining backhaul over the long distance from Vancouver back to the prairies.

At the present time, the railways do not fear a loss of grain traffic to the Mississippi River System. A recent M.Sc. study by Ms. P. M. Miller at the University of Manitoba has suggested that such movements could be feasible if barge rates continued at a low level, but it is by no means certain that the Mississippi is a feasible alternative transport route for Canadian grain. In addition, there is the problem of whether such movements would be politically acceptable.

The railways have stressed that, if the WGTA is changed to a "pay the producer" basis, measures must be taken to ensure equitable competition with highway transport. In addition to the general problem of user charges and the increased congestion that would result from any substantial transport of grain on the highway, there would be need for considerable deregulation of grain transport by rail. Present delays on variable rates for the transport of grain would have to be eliminated, the extensive structure of low density branchlines could no longer be maintained, and the Canadian Wheat Board quota system would have to be changed to give the railways greater control over shipping patterns and to facilitate the use of solid grain trains. The farmer has become more price conscious and this will be even more marked under a "pay the producer" payment system; the railways emphasize the need to ensure that legislators and regulators do not inhibit railway response to the new conditions.

5.2.4 CN Service to Northern Manitoba

In addition to general erosion of rail volumes, CN Rail has a problem in operating a viable service to Northern Manitoba. The main traffic has been export grain to Churchill and there have been low shipments in the last two years. As will be explained in Chapter 7, nickel shipments from Thompson are now proceeding mainly by truck. The Limestone Project is nearing completion; however, it has now been announced that the Conawapa Project is to proceed and this will generate additional freight demand.

Rail traffic in Northern Manitoba has been almost halved in the last ten years and the area is not regarded as attractive for new rail investment. It is considered that Northern

Manitoba beyond Flin Flon and The Pas generates only enough traffic for one transport mode, and not enough for truck and rail to compete. Major shipments from Hudson Bay Mining and Smelting at Flin Flon and from Repap at The Pas are still economic, but rail prospects for much of the rest of the north are not promising.

5.3 ORGANIZED LABOUR AND THE RAILWAY INDUSTRY

Meetings were held with most of the trade unions which represent railway workers. Some of these meetings covered fairly wide areas of discussion, but the comments below are generally limited to employment opportunities in Manitoba.

Railway train crews are represented by two unions. The Brotherhood of Locomotive Engineers (BLE) represents the engineers who drive the locomotives. The interview was with the local representing CN and VIA employees; Manitoba membership is approximately 250, but this excludes CP employees. Although the BLE has not been affected by technological change to the same extent as other railway unions, the General Chairman for Western Canada still suggested that membership had declined by approximately 20% since 1981. A major concern in respect of Manitoba is the diversion of grain shipments to British Columbia ports at the expense of Thunder Bay. Although Manitoba grain is unlikely to travel west, the transfer of Saskatchewan grain to British Columbia reduces railway employment, as fewer trains pass through Manitoba.

The United Transportation Union (UTU) has a CN and VIA membership of about 1,000. This union organizes all train crew employees except for engineers and dining car and sleeping car staff on passenger trains. Since 1981, the decline in UTU membership has been slightly greater than for locomotive engineers because of reduced train crew sizes. The problem will be more severe over the next decade. Cabooseless trains are now being implemented by both CN and CP. Initially, freight train crews will consist of three employees, whereas formerly some trains had four crew members. Although there will be no immediate pressure to reduce the crew size to two, this is still likely to occur over the decade. The problem of grain shipments to Thunder Bay was not specifically raised in this interview, but any loss to British Columbia ports will affect UTU members in Manitoba as well as BLE members.

The Canadian Brotherhood of Railway Transport and General Workers (CBRTGW) organizes CN white collar workers in activities such as car control offices and stores, a substantial number of workers in CN shops, CN intermodal employees, and VIA Rail employees in reservations offices and in dining and sleeping cars. The union covers approximately 1,800 CN employees and most of the VIA staff. There is no involvement with CP, but it was explained in Chapter 4 that CBRTGW organizes several trucking firms and Grey Goose Bus Lines. The main problem facing the union is, of course, declining employment in the rail mode.

The Rail Canada Traffic Controllers (RCTC) represents the dispatchers and traffic controllers at CN Rail and CP Rail. Employment in Manitoba is currently about 200 and has declined dramatically in recent years. Technological changes, such as centralized traffic control and computerized manual block systems, are responsible for the elimination of many jobs. Dispatching duties once carried out by CN Rail in The Pas and Dauphin have been moved to Winnipeg and the area controlled by Winnipeg stretches from Thunder Bay to mid-Saskatchewan. The union fears that further consolidation of CN traffic control functions could mean all traffic movements in Western Canada controlled from Edmonton, with the function phased out of Winnipeg.

CP employment of RCTC members has fallen less in Winnipeg because of a 1986 transfer of functions from Saskatoon and Moose Jaw. RCTC did not express fears of a CP move out of Winnipeg, but this is always a potential problem in a function which has experienced such dramatic change as train control. Further change is also in prospect as the railways implement Advanced Train Control Systems.

The Brotherhood of Railway Carmen (BRC) is the main union in the maintenance of cars, with the International Association of Machinists and Aerospace Workers (IAMAW) organizing the locomotive overhaul functions. The BCR represents some 1,300 employees in CN and CP shops. Of all railway activities, these trades suffered the most severe employment reductions in the 1980's. Technological change has eliminated jobs; for example, the use of roller bearings has reduced car maintenance, steel hopper cars for grain require fewer repairs than wooden box cars, and flat cars used to transport containers and piggyback shipments are relatively maintenance free. In the course of the 1980s, Manitoba lost jobs on passenger car maintenance, as this work was transferred to Pointe St. Charles in Montreal; on the other hand, CN centralized all freight car heavy maintenance in Winnipeg at the expense of Montreal and Moncton. Theoretically, there should have been a net gain in jobs resulting from these changes, but this was more than offset by staff reductions caused by technological change.

The BRC expects that the loss of employment will be less severe in the 1990s, provided that rail movements are not badly affected by changes in the Western Grain Transportation Act to a "pay the producer" basis. Technological change will continue and the railways will try to cancel mid-way inspections of transcontinental trains in Winnipeg. However, the BRC does not consider that the locomotive and car shops will be the major sufferers in the upcoming decade and this also seems to be the view of railway management.

Locomotive overhaul and maintenance in the Winnipeg shops is organized by the IAMAW and this union is also active in the aerospace and transport equipment manufacturing industries. Union membership in the Winnipeg rail shops is slightly over 1,000 and this has been declining. The union felt that there was need for greater consultation between union and management in respect of employment and future change.

The Brotherhood of Maintenance of Way Employees (BMWE) represents just over 1,000 track maintenance workers with CN Rail and CP Rail in Manitoba. Membership is down considerably from the beginning of the decade, partly because of branchline abandonment but mainly as a result of technological change. The greater use of continuous welded rail and mechanized track inspections using track geometry cars have reduced employment formerly carried out by BMWE members. Further employment declines can be expected.

The railway unions are well aware of the problem of declining employment in the railway industry. In some of the meetings, railway safety issues were raised and it was suggested that railway labour forces were being reduced too quickly. Nevertheless, there did seem to be a general recognition that large reductions in railway labour forces were inevitable and that the unions had very little ability to influence this. Although UMTI researchers did not explore union-management agreements on lay-off procedures and early retirement provisions, these seem to have been negotiated on a basis which is reasonably acceptable to the unions. Notice needs to be taken of the BLE comment that increased shipments of Saskatchewan grain to British Columbia ports will reduce the employment opportunities from moving this grain through Manitoba and also that any movement to "pay the producer" under the WGTA would also reduce railway employment in the grain movement.

5.4 PROSPECTS AND CONCERNS

This section starts with a summary of Chapter 5. Prospects and concerns are then addressed.

1. Employment in the Canadian railway industry has fallen very substantially in recent years; employment of 73,500 in 1989 can be compared with a figure of about 120,000 in 1961. The decline in employment has been particularly marked in the 1980s and will continue to the year 2000 and beyond.

2. Manitoba had a 13.2% share of Canada's railway jobs in 1989, against a 4.1% share of Canadian population. Railway employment in Manitoba that year was 9,700 - 6,200 with CN Rail, 2,900 with CP Rail and 600 with VIA Rail. Average weekly earnings in railway transport are higher than in any other major transport mode.

3. Although the Manitoba share of railway employment has not declined in the 1980s, the volume of employment has fallen very substantially, as it has in Canada as a whole. On the negative side, the status of Winnipeg in the administrative hierarchy of the railways has declined. On the positive side, Winnipeg has consolidated its position in railway equipment overhaul.

4. CN Rail has some 16% of its national employment in Manitoba. Of the 6,200 employees, roughly 1,200 were employed in operations outside Winnipeg; transportation functions at Symington Yard provided some 1,900 jobs; there were 2,600 jobs in Transcona; and the remaining 500 jobs are in headquarters activities. CN has already centralized its major car and locomotive backshop activities in Transcona for the whole of Canada and there is therefore little prospect of Manitoba gaining further equipment jobs. If CN employment in Manitoba were only serving traffic originating in, destined for or passing through Manitoba, employment in the province might be only one-third of the figure recorded.

5. CP Rail had some 2,900 employees in Manitoba in 1989, of whom 400 were located outside Winnipeg. Of the employees in the city, the Winnipeg Division employed 1,000 in the operation of trains, including the diesel shop for locomotive running repairs. CP work on car and locomotive heavy maintenance is not centralized to the same extent as CN; Weston shops share the bulk of the car maintenance with Calgary, but heavy locomotive maintenance is in Calgary. Weston shops provided over 800 jobs, there were 150 workers on rail and track material in Winnipeg, and the remaining 500 jobs were in general administration and a variety of other activities.

6. VIA Rail provided just under 600 jobs in Manitoba in 1989, with the bulk of these in Winnipeg. This was equivalent to 8% of total VIA employment. However, with cutbacks in passenger rail services effective January 15, 1990, some 200 of the VIA Rail jobs have been lost.

7. The railways have expressed several concerns in respect of their operations in Manitoba. These include levels of taxation, particularly payroll tax, the tax on diesel fuel used on the railways, and proposed changes in the basis for property taxes in Manitoba. The railways are concerned at the erosion of rail volumes and truck competition subsidized by inadequate recovery of the costs of highway infrastructure. This is a national and not a specifically Manitoban problem, but CN also has a specific concern in respect of the viability of service in Northern Manitoba. Although the railways maintain a policy of neutrality as to how government payments should be made under the Western Grain Transportation Act, there is concern that any move to "pay the producer" should be accompanied by a removal of constraints in the WGTA which prevent quick railway reaction to changing market conditions.

8. Railway unions are very conscious of the effects of reduced employment opportunities in the railway industry. Several unions suggested that the reduction in employment had proceeded too rapidly to meet the requirements of rail safety. However, in general there seems to be a philosophical acceptance of the inevitable decline in employment. This has probably been facilitated by arrangements to ease the reduction in employment, for example early retirement provisions, although the present UMTI study has not investigated this matter. The BLE pointed out that any shift in grain exports from Thunder Bay to British Columbia would also reduce rail employment in Manitoba, as less grain would be transported through the province from Saskatchewan.

The recommendations below are made in the context of general recognition by railways, labour and government that employment opportunities in the railway industry will continue to shrink to the year 2000 and beyond.

1. The federal government should:

(a) ensure that, if the Western Grain Transportation Act is changed to a "pay the producer" basis, amendments will also be created so that the competitive response of the railways will not be inhibited by such requirements as time delays in introducing reduced rates to meet competitive circumstances;

(b) examine the overall future of rail transportation in northern Manitoba, working with the provincial government and recognizing that CN may need direct subsidy assistance to continue operating this service.

2. The provincial government should:

(a) determine whether it is in the interests of the province to continue burdens on the railways in such areas as payroll tax, diesel fuel tax and increased property taxes on railway right-of-way;

(b) examine all opportunities to increase CP Rail's car and locomotive heavy overhaul activity in Winnipeg.

CHAPTER 6: THE TRANSPORT EQUIPMENT MANUFACTURING INDUSTRIES

As we have seen in earlier chapters, Manitoba is important in its share of Canadian employment in the transport service modes. This is particularly true of rail, but it is also quite marked in the highway and air transport modes. If a location is important in the provision of a service such as transport, there could be an expectation that this service activity would also attract production facilities to manufacture transport equipment. This would be a symbiotic relationship with the main stimulus that of transport services requiring the production of transport equipment, but also a less strong counter effect of transport equipment manufacturing stimulating the demand for transport services. For these reasons, it was decided to include an examination of the transport equipment manufacturing industries in the study.

Unfortunately, to anticipate the results of this chapter, Manitoba had only a 3.2% share of national employment in transport equipment manufacturing in 1989. This was less than the 4.1% share of national population and far less than Manitoba's 6.1% share of Canadian employment in the transport service industries. Transport equipment manufacturing in Canada provided 220,000 jobs in 1989, which was considerably less than the 469,000 jobs provided by the transport services. This contrast was much more marked in Manitoba where there were 28,500 jobs in transport services against an employment of only 7,000 in the transport equipment manufacturing industries. Again anticipating the content of this chapter, the explanation is that Manitoba is almost shut out of the very important manufacture of motor vehicles and motor vehicle parts and accessories.

The present chapter starts with an examination of basic statistics relating to the transport equipment manufacturing industries. Subsequent sections review aircraft and aircraft parts manufacturing; highway transport manufacturing; railroad rolling stock manufacturing; and shipbuilding, boatbuilding, and repairs. The final section reviews prospects and concerns. Although interviews have been conducted with a number of leading firms in transport equipment manufacturing, the review in this chapter has been carried out in less detail than in the earlier chapters on the transport modes; in addition, there have been no interviews with labour unions in this sector.

The definition of an industrial sector is never completely straightforward. There are always blurred lines as to where an establishment should be classified, particularly if it produces more than one product. Consequently, there is some reference in the later sections of this chapter to firms which Statistics Canada classifies outside the transport equipment manufacturing industries. It should also be noted that some of the major repairs and overhauls undertaken in-house by transport carriers would be classified as manufacturing rather than service activities, if these were contracted to outside enterprises.

6.1 BASIC STATISTICS

Basic statistics for transport equipment manufacturing in Canada and Manitoba are presented in the table below for 1986, which is the latest year for which this detailed material has been published.

Table 6.1.: Basic Statistics - Transport Equipment Manufacturing

	Manitoba 1986	Canada 1986	Manitoba share - %
Manufacturing shipments ($mn)	449.8	44,400	1.0
Number of establishments	62	1,556	4.0
Number of employees	5,986	214,283	2.8
Wages and salaries ($mn)	150.1	6,749	2.2
Value added ($mn)	255.0	13,861	1.8
Value added as % of manufacturing shipments	56.7	31.2	

Source: SC 31-203.

From the figures of manufacturing shipments, it would seem that Manitoba does not rank very prominently in transport equipment manufacturing. Only 1.0% of shipments in this sector originated in Manitoba and this is lower than the province's 2.2% share of total manufacturing shipments. The revenue which manufacturers obtain from their shipments has, of course, to cover two categories of costs - the costs of materials and services which are bought from outside the establishment and the costs which the manufacturer incurs in respect of the factors of production which he employs directly, particularly salaries and wages and the cost of capital invested in the business. This second category of costs is described as the value added by the establishment. The table shows that the Manitoba share of the transport equipment industry is higher in terms of value added than in terms of shipments. The Manitoba industry is also relatively labour intensive, accounting for 2.8% of total Canadian employment in this sector. Nevertheless, from a superficial look at the figures, the province does not have an outstandingly high share of transport equipment manufacturing.

In terms of manufacturing shipments of over $44 billion, the transport equipment sector was the largest of all 22 industrial classification groups in Canada in 1986. The food industries were in second place at $34 billion, followed at a substantial distance by paper and allied products, chemical and chemical products, and primary metal industries. However, it was only in Ontario that transport equipment manufacturing was the most important industrial sector. In Manitoba, the food industries were far ahead in first place with 1986 shipments of $1,680 million; transport equipment was in second position with shipments of $450 million. Transport equipment was in third position in Nova Scotia and Quebec, sixth position in British Columbia, seventh position in Saskatchewan, fourteenth position in Alberta, and too small for figures to be released for the three other Atlantic provinces. In other words, with the sole exception of Ontario, transport equipment manufacturing was relatively more important in the industrial structure of Manitoba than in the other provinces of Canada.

In terms of employment, using 1986 data, transport equipment manufacturing was most highly concentrated in Ontario (157,100 employees) followed by Quebec (36,000) and British Columbia (6,300). Manitoba was in fourth place (6,000). This Manitoba figure was higher than for the four Atlantic provinces together (5,900), and vastly in excess of Alberta (2,200) and Saskatchewan (800).

The next step is to resolve the paradox between two statements that appear to be conflicting. Transport equipment in Manitoba accounted for only 2.8% of total Canadian employment in this sector in 1986 yet, after Ontario, the transport equipment industry is relatively more important than in any other province. The problem lies in the motor vehicle and motor vehicle parts and accessories industries. Across Canada, these accounted for 139,000 employees in 1986, with only about 800 of these jobs in Manitoba. Excluding motor vehicles and associated parts and accessories, aggregate employment in transport equipment in Canada would have been only 75,500 in 1986. The corresponding figure for Manitoba would have been 5,200. This would have given Manitoba a 6.9% share of the Canadian transport equipment sector, or more than the province's 6.1% share of the transport services sector.

Table 6.2 shows historic data on employment in transport equipment manufacturing in Canada and Manitoba. Data for 1987-89 are taken from SC 72-002; this appears to underestimate employment by about 2%, but the shortfall could be greater than this on the 1987 figure.

Employment in the transport equipment manufacturing sector has grown considerably. Between 1971 and 1981, Canadian employment increased by some 19%. The sector was very adversely affected by the 1982 recession, but it has since recovered. The 1989 employment figure was 23% higher than in 1981.

Table 6.2: Employment in Transport Equipment Manufacturing

Year	Canada	Manitoba	Manitoba Share - %
1971	150,200	4,600	3.1
1976	162,200	5,300	3.3
1981	178,600	6,400	3.6
1982	161,100	6,400	4.0
1983	173,400	5,700	3.3
1984	195,600	5,600	2.9
1985	211,000	6,000	2.8
1986	214,300	6,000	2.8
1987	200,400	6,400	3.2
1988	212,900	6,500	3.1
1989	219,800	7,000	3.2

Source: 1986 and prior years from SC 31-203. 1987 to 1989 from SC 72-002, with 1989 as latest available annual data for November 1988/October 1989.

The Manitoba share in transport equipment manufacturing was increasing in the 1970s and indeed peaked in 1982. Traditionally, the Manitoba economy has been regarded as less affected by booms and busts than Eastern Canada and recessions tend to come later in the province; this would explain the high 1982 share of employment. Since then, the Manitoba share has been lower than the figure achieved in 1981, in spite of some recovery since 1986.

Canadian employment growth in transport equipment manufacturing in the first half of the 1980s was entirely in motor vehicles and motor vehicle parts and accessories and Manitoba is largely shut out of these activities. Since 1986, motor vehicles and associated parts and accessories have been less buoyant and this explains the recovery in the Manitoba share. Employment trends and Manitoba's shares in the various sectors of transport equipment manufacturing are discussed later in the chapter.

Table 6.3 shows the distribution of establishments by size in the transport equipment sectors of Manitoba and Canada. The majority of establishments have under 50 employees - 76% in Manitoba and 71% in Canada. Nevertheless, this is an industry where a very substantial proportion of employment is found in the larger establishments.

Table 6.3: Establishments by Size in Transport Equipment Manufacturing

	Manitoba-1986		Canada-1986	
Number of employees	Establishments	%	Establishments	%
Under 20	32	52	847	55
20-49	15	24	245	16
50-99	4	6	161	10
100-199	5	8	111	7
200-499	2	3	115	7
Over 500	4	6	73	5
Total	62	100	1,556	100

Source: SC 31-203.

The final subject addressed in this section is the level of average weekly earnings of employees in the transport equipment manufacturing industry. In July/September, 1989, these amounted to $517.54 for transport equipment manufacturing in Manitoba as against $657.19 in this sector for Canada. The Manitoba shortfall was 21%, which is larger than the 16% shortfall for manufacturing industry as a whole. Although the explanation for this is partly that Manitoba has virtually no jobs in the high-paying motor vehicle sector, a calculation made for the present study suggests that this explains only one-fifth of the Manitoba shortfall. Earnings within each sector of transport equipment manufacturing tend to be lower here than in Canada as a whole.

6.2 THE AIRCRAFT AND AIRCRAFT PARTS MANUFACTURING INDUSTRY

The Statistics Canada description of "aircraft and aircraft parts manufacturing industry" has been used in this section, but the term aerospace industry is also used as a synonym. On the basis of estimates made by the Manitoba Department of Industry, Trade and Tourism, some 68% of 1986 sales of the Manitoba aerospace industry were for commercial purposes and 32% were military sales. The industry is therefore more closely related to commercial output than to military production. Exports accounted for 70% of commercial and for 22% of military sales.

Table 6.4 gives basic statistics relating to the aircraft and aircraft parts manufacturing industry in Manitoba and Canada in the year 1986, together with additional employment data for 1981 and 1989.

Table 6.4: Aircraft and Aircraft Parts Manufacturing

	Manitoba 1986	Canada 1986	Manitoba Share - %
Manufacturing shipments ($mn)	203.8	3,292	6.2
Number of establishments	9	198	4.5
Number of employees	2,977	38,409	7.8
Wages and salaries ($mn)	76.9	1,226	6.3
Value added ($mn)	134.0	1,896	7.1
Value added as % of manufacturing shipments	65.8	57.6	
Number of employees - 1981	2,557	39,029	6.6
1989	3,600	44,300	8.1

Source: SC 31-203. Employment for 1989 from SC 72-002 covers November 1988/ October 1989.

The Manitoba share of the Canadian aircraft and aircraft parts manufacturing industry is appreciable. The province accounted for 6.2% of Canadian manufacturing shipments and 7.8% of employment in 1986. The value added was very high in relation to manufacturing shipments, with the Manitoba ratio of 65.8% higher than for Canada as a whole. Following the general pattern of manufacturing industry, average weekly earnings in Manitoba in 1986 were 19% below the national figures in aircraft and aircraft parts, although this figure does not allow for 138 differences in skill levels required in different parts of the industry.

The aircraft and aircraft parts manufacturing industry in Canada was not very buoyant in the first half of the 1980s. Employment in 1986 was marginally less than in 1981. Later figures show considerable improvement, with 1989 employment 15% higher than in 1981. The Manitoba industry was not affected by the slowdown of the early 1980s and the share of Canadian employment has increased. Employment in the Manitoba aircraft and aircraft parts manufacturing industry averaged 3,600 in 1989. This excludes the overhaul activities of Air Canada, covered in Chapter 3 and providing 470 jobs.

Manitoba activities in the aerospace industry go back as far as the early days of aviation in Canada with the repair and overhaul of small private and commercial aircraft. Today, the sector is the third largest in Canada and offers repair, overhaul, modification and service of fixed-wing and rotary aircraft, aircraft engines and accessories. In avionics, the sector can service and repair microcomputer and integrated processing systems. The sector also produces a variety of more specialized products such as aerial target systems, upper atmosphere rockets, wired strike protection systems for helicopters and rocket motors. The Manitoba aircraft and aircraft parts industry is diversified and, with a few minor exceptions, the companies represented are not competitors.

The discussion below covers the three large aerospace firms in Manitoba - Bristol Aerospace, Boeing and Standard Aero, followed by brief reference to five smaller firms in the industry - Aero Recip, Aerotech, Composite Technology, Mid-Canada Equipment Sales and SKK.

Bristol Aerospace Limited is the largest employer in the aircraft and aircraft parts manufacturing sector in Manitoba. The company was established as long ago as 1930 and is a Canadian owned subsidiary of Rolls Royce Industries Canada Incorporated. Employment is about 1,400. Principal products and services include fixed and rotary wing aircraft overhaul and repair, large airframe structures, solid propellant rocket systems, jet engine components, defence electronic and telemetry equipment, environmental systems, wire strike protective systems for helicopters, CRV-7 rockets and hot section engine component manufacture and overhaul. The split of Bristol's work is approximately 70% defence and 30% commercial. Over the years, Bristol has shown great ability to meet a wide variety of market demands and has proved innovative in its production work methods and its ability to incorporate new technologies in an area of rapid change.

The second largest Manitoba firm in the aircraft and the aircraft parts sector is Boeing Canada Technology Ltd. (Winnipeg Division). This was established in 1971 as the result of an offset agreement related to RCAF purchases of Boeing 707 aircraft. The plant produces composite material structural components and, starting some five years ago, it has undertaken assembly work in addition to construction of components. The plant is a subsidiary of the Boeing Company of Seattle, Washington, and most of the work carried out is on contract from the parent company. However, the parent company requires each plant to bid for production work and the Winnipeg company therefore has to be fully competitive. Employment is about 1,250 and has grown very substantially in the last five years. The company has commenced construction of a new facility in Winnipeg to be completed by June 1990 and prospects for further employment growth appear to be good.

Standard Aero Limited has been long established in Winnipeg, going back as far as 1938. Employment in Winnipeg was 750 at mid-1989. This company used to be a subsidiary of

Federal Industries: about two years ago it was sold to Acorp Industries Inc. and in late 1989 it was purchased by Hawker Siddeley. The principal activities are the overhaul and remanufacture of turbo-prop and turbo-shaft engines for fixed wing and rotary aircraft. Approximately 75% of the company's business is civil and 25% military. Like all the leading members of the Manitoba aircraft and aircraft parts sector, the marketing area of the company is worldwide.

There are five further firms in transport equipment manufacturing, all located in Winnipeg, of whom three are in the employment range of 30-50 and two in the range 10-25. Although these companies have all provided figures of current employment, only the total employment figure of 200 is presented here, with this also including four other very small firms, each with less than five employees. Aero Recip (Canada) Ltd. was established in 1988 as an independent firm to carry out the overhaul of reciprocating engines and accessories, previously undertaken by Standard Aero. Aerotech International Incorporated supplies ground support for aircraft, mainly in respect of heaters. Composite Technology (Canada) Ltd. was established in 1982 as a U.S. branch plant for the repair and overhaul of helicopter blades. Mid-Canada Equipment Sales manufactures and repairs ground support equipment for aircraft, including de-icing equipment, portable heaters, stairs and baggage carts. SKK Corporation was formerly part of Spiroll Kipp Kelly Incorporated and provides precision machinery for the air industry.

There is considerable optimism in respect of the aircraft and aircraft parts manufacturing industry in Manitoba on the part of both government and the industry itself. This was given further confirmation by the announcement on October 13, 1989, that Hughes Aircraft Company, a subsidiary of General Motors, is to develop in Winnipeg a monitoring system for diagnosing engine noise in aircraft. The plant will have a full research and development component. Initial employment is expected to be 200, rising later to about 450.

The aircraft and aircraft parts manufacturing industry provides one-half of total Manitoba employment in transport equipment manufacturing and has fared better here than in Canada in the 1980s. In 1986, Statistics Canada recorded only two manufacturing establishments in Manitoba with more than 1,000 employees. These were Bristol Aerospace and Canada Packers. Although official data are not yet available, in 1989 Manitoba has four establishments with employment over 1,000. Two of these are in the aerospace industry - Bristol Aerospace and Boeing, while Standard Aero is also very large. (For the record, the other two firms with over 1,000 employees are Motor Coach Industries and Burns Meats.)

In addition to the firms listed in this section, many other firms in Manitoba, which are not primarily in the aerospace industry, have capabilities which can be used in this sector. Full details have been given in a useful recent publication by the Manitoba Department of Industry, Trade and Tourism entitled Manitoba Aerospace Technology: Capability Directory. The following quotation from this publication expresses well the soundly based provincial confidence in the aerospace industry.

> For more than fifty years, the Province of Manitoba has been a proud and dynamic contributor to the Canadian aerospace industry, consistently demonstrating our capability and competency on the leading edge of aerospace-related technological developments.
>
> A glance at Manitoba's track record in aerospace reveals pioneering and innovative advances in rocket design, in upper atmospheric balloon experimentation, in satellite structural and component work, in remote sensing and data transmission, and in propellants, exotic material fabrication, and biotechnology.
>
> Manitoba's aerospace sector remains a vibrant and innovative economic performer, and is well positioned to benefit from many of the peaceful applications of space technology, including communications, environmental monitoring, remote sensing and data analysis.

However, although the Manitoba aerospace industry is "vibrant and innovative", as in any field of human endeavour, there can be problems. The industry is international in its markets, with some 56% of Manitoba production exported outside Canada. Manitoba has always been regarded as a favoured location for the aerospace industry in terms of ability to serve the whole of North America and in respect of quality of labour, but the activity is not necessarily tied to a Manitoba location. There were relatively few complaints from the industry in respect of taxation, but attention was frequently drawn to three issues - the minimum size necessary for a viable aircraft and aircraft parts manufacturing industry, the problems of employee training, and the dependence of the industry on government contracts.

Winnipeg is now the third largest aircraft and aircraft parts manufacturing centre in Canada. Employment is currently 3,600. When the Air Canada overhaul base with its 470 employees is included, there are some 4,000 jobs in aerospace here. The concept of a critical mass for any industry to be viable in a community is generally recognized; workers need more than one firm that can offer employment, employers do not wish to be completely dependent on labour forces which they have trained themselves, and smaller firms can develop to provide specialized goods and services. The concept of external economies of scale to an industry in a specific location is well accepted, although the quantitative determination of the minimum size of a critical mass is always more debatable.

When Air Canada overhaul activity was minimal in Winnipeg at the beginning of the 1970s and Boeing was not yet established, the Manitoba aerospace industry was mainly Bristol Aerospace and Standard Aero. There would be general agreement that this did not constitute a critical mass. Since then the Air Canada overhaul activity has become significant and Boeing has expanded, particularly in the last five years. The growth in the industry has been welcomed, not only by the province, but also by the two original members of the Manitoba aerospace community. Competition for markets between the various firms is relatively limited, as their specialities are different; although they may compete for labour, there are very real economies to an extension of the overall aerospace industry here. In urging the importance of a critical mass, one manufacturer stated in an interview with UMTI that Winnipeg had now attained critical mass status, but not with much to spare. It is the UMTI impression that this would be a general industry view and the need to build on this is well recognized by government and industry.

The second area of concern in respect of the aerospace industry relates to the supply of skilled workers. In Chapter 3, it was indicated that this was also a concern at the Air Canada overhaul base. In interviews with the three leading aerospace manufacturers in Manitoba, one company stressed the lack of skilled workers in the Winnipeg area, stating that it had to run its own training programs. A second company voiced almost identical views, pointing out that there were no specific aeronautical courses at community colleges or universities in Manitoba. The third company also expressed the same views and indicated difficulty in attracting non-Manitoba born professionals to Winnipeg. Training facilities in Manitoba were contrasted, to our disadvantage, with comparable facilities for the large aerospace sector in Quebec. Training programs were needed to teach robotics, computer programming and computer control, repair and maintenance.

Mr. Murray Auld, the retired president of Bristol Aerospace, gave considerable advice to UMTI on the aerospace industry. He confirmed the need for training expressed by the firms in the industry and outlined efforts made to implement this in recent years. The need for training is highlighted in the recommendations in the final section of this chapter. This was expressed more forcefully in the aerospace industry than in any other area surveyed in study.

The third area of concern is federal government contracts and the importance of this is recognized by all firms in the industry. The need for strong provincial government lobbying was expressed, although not in a manner critical of efforts made to date.

When Bristol Aerospace failed to obtain the CF-18 contract in October 1986, this was followed by an announcement on January 21, 1987 that the company had been assigned the maintenance work on the CF-5 fighter plane by the federal government. Repair and overhaul work commenced on the CF-5 in 1988 and is continuing. However, with the cutback in defence expenditures announced in the 1989 federal budget, the wing replacement and the avionics work promised to Winnipeg may not materialize. According to press reports, confidential negotiations are still underway and the extent of loss of work has not been determined. Regardless of the outcome, this serves to demonstrate the element of uncertainty in government contracts.

In addition to the more understandable problems on contracts such as the CF-5, the aerospace industry is also at risk to political decisions on the awarding of contracts. This section closes with a brief reference to the CF-18 maintenance contract. On October 31, 1986, the Federal Government announced that the contract to maintain Canada's CF-18 fighters would be awarded to Canadair Ltd. of Montreal. Although only the initial phase of the contract was awarded, it was recognized explicitly by the Federal Government that Canadair would probably retain the maintenance work over the next twenty years at a total contract value of $1.4 billion and the immediate creation of 242 direct jobs and another 89 indirect jobs in the Montreal area.

The Bristol Aerospace bid for this contract was lower than that submitted by Canadair, and Bristol was given "a substantially higher performance rating than the Montreal aircraft manufacturer for the work covered in the contract" (The Globe and Mail, November 1, 1986). The Federal Government claimed that the key determinant in giving the contract to Canadair was considerations of technology transfer. It was argued that Canadair as an aircraft manufacturer could benefit from this more than Bristol, which specializes in aircraft maintenance, but does not make planes. The loss of the CF-18 contract is still a source of resentment to many in the Manitoba community, even although Bristol

Aerospace has wisely refused to dwell on the past and has constructively addressed its efforts to the future.

6.3 THE HIGHWAY TRANSPORT MANUFACTURING INDUSTRY

The highway transport manufacturing industry relates solely to the production of vehicles and does not cover any activities associated with highway construction. The industry is reported by Statistics Canada under three Standard Industrial Codes (SIC) - SIC 324, truck and bus body and trailer manufacturing; SIC 325, motor vehicle parts and accessories; and SIC 323, motor vehicles.

Table 6.5 gives basic statistics for the truck and bus body and trailer manufacturing industry in 1986, together with employment figures for 1981 and 1989.

Table 6.5: Truck and Bus Body and Trailer Manufacturing

	Manitoba 1986	Canada 1986	Manitoba Share - %
Manufacturing shipments ($mn)	130.5	1,302	10.0
Number of establishments	19	311	6.1
Number of employees	1,481	12,979	11.4
Wages and salaries ($mn)	32.9	295	11.2
Value added ($mn)	60.5	487	12.4
Value added as % of manufacturing shipments	46.4	37.4	
Number of employees - 1981	2,200	13,112	16.8
1989	1,900	21,100	9.0

Source: SC 31-203. Employment for 1989 from SC 72-002 covers November 1988/ October 1989. However, it is clear that the industry described by SC 72-002 is much more extensive than that covered in SC 31-203.

The truck and bus body and trailer manufacturing industry is of considerable importance in Manitoba. Of the nineteen establishments located in the province, five are in the truck and bus body area including the bus manufacturers, Motor Coach Industries Ltd. and New Flyer Industries Limited. Two establishments are in the commercial trailer industry and ten establishments are in the non-commercial trailer industry. The mobile home industry with only two establishments includes Triple E Canada Ltd.

The truck and bus body and trailer manufacturing sector was not buoyant in the first half of the 1980s. Canadian employment showed a 1% decline, while Statistics Canada figures indicate a vast reduction in Manitoba employment. The Canadian industry seems to have shown some recovery since 1986, but it is apparent that there are considerable difficulties in reconciling the two statistical sources used in Table 6.5.

The largest company in the Manitoba sector of this industry is Motor Coach Industries Ltd., including its wholly owned subsidiary, Frank Fair Industries. The company has been operating in Winnipeg since 1953 and is owned by Greyhound Inc. of the United States. It manufactures intercity, suburban and commuter bus bodies and has substantial exports to the United States. Employment has fluctuated considerably in the last year, but would appear to have averaged over 1,000 jobs.

The other Manitoba bus manufacturer, New Flyer Industries Limited, ranks in second place in Manitoba's truck and bus body and trailer manufacturing industry. This firm has some 350 employees and produces mainly buses for the urban transit market. The company was established in 1930 and purchased some two years ago by Den Oudsten of Holland. Most of the company's sales are in the United States.

In view of the importance of the bus industry to Manitoba, the federal and provincial governments developed an Urban Bus Technology program as part of the 1984 Economic and Regional Development Agreement. Manitoba was designated as "a national centre of expertise" in urban bus manufacture. Five technical areas were identified for development - modular body design; composite body design; off-board diagnostic systems; transit vehicle information systems; and hydraulic energy storage devices. The program was not necessarily confined to these areas and could be tailored to the specific needs of individual projects. However, in spite of very real development efforts, the actual success of this program was somewhat limited and it was terminated in 1989. The final technical review has not yet been released, but perhaps the experience illustrates in part the difficulties of trying to build in a market with limited growth potential and considerable production over-capacity in North America.

Triple E Canada Ltd., located in Winkler, Manitoba produces motor home recreational vehicles and there is also some production of highway and farm trailers in the Load King plant. The company was established in 1965 and is completely Canadian owned. It is a leader in its field serving primarily the more expensive part of the market. It obviously has a tremendous impact on the Winkler area of rural Manitoba. Sales are virtually entirely in the Canadian market, 50% of purchases are made in 55-65 age-group and, with the aging population, prospects over the next decade are obviously good. However, recreational motor homes are a luxury item and consumers can postpone purchases in difficult times, for example the 1982 recession. The industry is therefore subject to business cycle fluctuations in activity. In 1989, a reorganization was underway and, with the general depression in the motor vehicle and recreational market, employment was down to 250. Generally, it has been considerably higher than this.

The two bus manufacturers and Triple E together currently provide some 1,600 jobs in Manitoba. These companies essentially assemble vehicles and call upon a wide array of suppliers. Over the years, they have progressively sought locally made components wherever possible and the Manitoba content in their production has been increasing.

However, this has inevitably been a long slow process and the Manitoba government continues to seek out more opportunities for these vehicle companies to buy in-province.

The study did not include interviews with smaller manufacturers in the truck and bus body and trailer manufacturing sector. Statistics Canada identified a total of nineteen establishments in this sector in 1986. Employment would seem to have been at least 500, but it is difficult to reconcile this with total employment in the sector of only 1,900 in 1989. The explanation may be that many of the companies in the truck body and trailer manufacturing business are also producing agricultural equipment and it is always debatable as to which statistical category they belong. Indeed, depending upon sales volume, they could move almost on a year to year basis between the statistical categories of transport equipment and machinery manufacturing.

Of the other companies in truck body and trailer manufacturing, only two have over 100 employees. Westeel, a Division of Jannock Ltd., has some 200 employees. The company is Toronto owned and is engaged in custom metal fabrication and the production of steel tanks, together with grain bins and grain handling systems which do not belong to the transport equipment industry. The Princess Group Inc. also has some 200 employees and produces a variety of products including hydraulic equipment, wagons and trailers. Both these firms are in agricultural machinery as well as transport equipment. Arne's Welding Ltd. is entirely in transport equipment and, with some 60 employees, produces dump and low bed semi-trailers. The remaining smaller establishments are mainly welding operations producing truck bodies and truck trailers.

Table 6.6 shows basic statistics for Manitoba and Canada in Code 325, motor vehicle parts and accessories.

Table 6.6: Motor Vehicle Parts and Accessories Manufacturing

	Manitoba 1984	Canada 1986	Manitoba Share - %
Manufacturing shipments ($mn)	38.6	12,922	0.3
Number of establishments	16	560	2.9
Number of employees	533	85,241	0.7
Wages and salaries ($mn)	11.1	2,456	0.5
Value added ($mn)	22.0	6,092	0.4
Value added as % of manufacturing shipments	57.0	47.1	
Number of employees - 1981	477	49,300	1.0
1989	600	74,400	0.8

Source: SC 31-203. Canada figures and Manitoba number of establishments relate to 1986. Other Manitoba figures and Manitoba shares are for 1984. It is not possible to calculate Manitoba shares from the raw data in the table, as 1984 Canadian data had to be used as the denominators for calculations relating to 1984 shares. Employment for 1989 from SC 72-002 covers November 1988/October 1989.

The manufacture of motor vehicle parts and accessories is, of course, highly concentrated in Ontario. The Manitoba share of the industry is small, accounting for some 600 employees in 1989. However, there are a number of establishments in Manitoba and elsewhere which are considered as machinery or metal fabricating, although their production also includes motor vehicle parts and accessories.

The largest firm in the motor vehicle parts and accessories manufacturing industry in Manitoba is the Temro Division of Budd Canada Inc. This company has 170 employees and specializes in the production of heating accessories and industrial silencers, which are sold to major automobile manufacturers, automotive retailers and automotive parts distributors. The company is a subsidiary of Budd Canada Inc. of Kitchener, Ontario and is heavily dependent on the export trade.

Although there are two other establishments with over 100 employees whose customers include the transport industry, these firms - Canadian Tool and Die Ltd. and Pritchard Engineering Co. Ltd. - are, respectively, more in agricultural machinery and general machinery and fabrication than in the transport field.

Establishments which are more specifically in transportation include four companies in the employment range of 50-74, accounting in total for 230 jobs. Autoline Products Ltd. specializes in carburetor assemblies, motor vehicle water pumps and distributor testers; Prairie Reman Ltd. remanufactures automotive assemblies; L and M Radiator Ltd. manufactures radiator cores and oil coolers; and Automotive Accessory Co. Ltd. produces pumps. The remaining firms in the Manitoba motor vehicle parts and accessories manufacturing are small with less than 25 employees and serve only the local market.

In the actual manufacture of motor vehicles, Statistics Canada reports only one Manitoba firm. This would appear to be Fort Garry Industries Ltd. with about 200 employees, whose products include fire trucks as well as other automotive equipment, trailers and truck bodies. Although this establishment is an important component of Manitoba's transport equipment industry, the Manitoba presence in the motor vehicle industry is almost negligible against national employment of 52,500 in 1989, of whom the majority were located in Ontario.

The conclusions to this section on the highway transport manufacturing industry are fairly obvious. Manitoba is important in the manufacture of truck and bus bodies and trailers, due largely to the presence of Motor Coach, New Flyer and Triple E. This is an important sector of the transport equipment industry and every effort must continue to be made to build on this strength.

However, the manufacture of motor vehicles and associated parts and accessories accounts for some 58% of all jobs in transport equipment in Canada. With 800 jobs, Manitoba just does not rate against the 1989 national employment of 127,000 in these sectors. Without real assistance by the federal government, the province is not going to gain any substantial foothold here.

6.4 THE RAILWAY ROLLING STOCK MANUFACTURING INDUSTRY

Table 6.7 gives basic data for railway rolling stock manufacturing in Canada in 1986. As there are only two establishments in this sector in Manitoba, confidentiality requirements prevent the release of data by Statistics Canada. An estimate of employment in 1989 has been obtained from interviews with the two firms in Winnipeg, Griffin Canada Inc. and Canadian Bronze Company Ltd.

Table 6.7: Railway Rolling Stock Manufacturing

	Manitoba 1986	Canada 1986	Manitoba Share - %
Manufacturing shipments ($mn)		1,028	
Number of establishments	2	27	7.4
Number of employees		7,446	
Wages and salaries ($mn)		234	
Value added ($mn)		285	
Value added as % of manufacturing shipments		27.7	
Number of employees - 1981	n/a	10,450	n/a
1989	350	7,500	4.7

Source: SC 31-203. Employment for 1989 from SC 72-002 covers November 1988/October 1989.

The railway rolling stock manufacturing industry is not a large sector. With 7,500 employees in 1989, it accounted for only 3.4% of total employment in transport equipment manufacturing. This employment figure does not include people employed directly by the railways in railway shops, as these are covered in the transport services sector of the economy. In-house repair and overhaul of railway equipment is a substantial activity. Consequently, the railways generate less spin-off activity for outside establishments than the other transport modes.

Griffin Canada Inc. is a subsidiary of Amstead Industries of Chicago and it provides 200 jobs in Winnipeg. The facility is a foundry specializing in producing wheels for freight cars. Because the dependability of the product is critical to rail safety, a high degree of precision and quality control is required in the steel casting. Roughly half the sales are to Canadian railways - CN, CP and British Columbia Railways - and half to U.S. railroads, primarily in the north. The company is highly dependent upon the volume of rail traffic and this can cause problems in years of recession, such as 1982.

Canadian Bronze Company Ltd. is a division of CAE Industries Ltd. of Toronto and provides 150 jobs in Winnipeg. The firm has serviced the railway industry for over ninety years. The Winnipeg plant was completely rebuilt in 1980 and it provides a full rail freight car running gear shop with fast turnaround time, capable of reconditioning complete wheels including axles and journal bearings. Customers include Canadian and U.S. railways, which provide almost 90% of the company's business.

Although Manitoba has two substantial participants in railway rolling stock, the province is much less important in this sector than in aerospace or buses. The 4.7% share of national employment in railway rolling stock compares with a 13.2% share of Canadian employment in railway transport. Given the heavy employment in railway shop activity by CN and CP in Winnipeg, it may seem surprising that there is such a limited presence in rolling stock manufacture.

The explanation is that none of the major manufacturers of railway locomotives and railway cars is located in Manitoba. However, this is a fairly small industrial sector and, with greater longevity of railway equipment and modest increases in railway traffic, it has not been a growth sector. Canadian railway equipment employment in 1989 was substantially less than in 1981. The industry is also subject to fluctuation in the level of activity, depending upon railway orders for equipment. Many major manufacturers in other parts of Canada have suffered considerable difficulties and this does not appear to be a very promising area for expanded manufacturing activity.

6.5 THE SHIPBUILDING, BOATBUILDING AND REPAIR INDUSTRY

To state the obvious, the location of shipbuilding, boatbuilding and repair depends on the presence of water. The Manitoba industry is confined to Lake Winnipeg. Basic data for Canada is contained in Table 6.8, together with less precise estimates of Manitoba activity.

Table 6.8: Shipbuilding, Boatbuilding and Repair

	Manitoba 1986	Canada 1986	Manitoba Share - %
Manufacturing shipments ($mn)	20	1,354	1.5
Number of establishments	15	413	3.6
Number of employees	330	14,613	2.3
Wages and salaries ($mn)		410	
Value added ($mn)		520	
Value added as % of manufacturing shipments	44.8	38.4	
Number of employees - 1981	n/a	20,468	n/a
1989	200	17,500	1.1

Source: SC 31-203 for Canada, supplemented with UMTI estimates for Manitoba. Employment for 1989 from SC 72-002 covers November 1988/October 1989.

Boatbuilding activity in Manitoba consisted of 14 boatbuilding and repair establishments with aggregate employment of 186 in 1986. The two largest establishments, each with approximately 15 employees, were Lake Winnipeg Boat Works Ltd. at Gimli and Riverton Boat Works Ltd. The Gimli establishment produces commercial fishing boats and smaller craft, while the Riverton establishment produces steel tugs, ferries, fishing and excursion boats. Sales are local, mainly to government agencies and fishermen.

There is one shipbuilding establishment located in Manitoba, Purvis Navcon Shipyard Ltd. in Selkirk, which used to produce barges and tugs, oil drilling rigs and associated equipment. The company was dependent on activities of oil exploration companies in the North West Territories, although one-third to one-half of the employees were Manitobans. From an interview with the owner of the company, there is no shipbuilding underway at the present time, but this could be resumed with renewed oil exploration activities. He saw little possibility of renewed activity, if the market were confined to Lake Winnipeg.

While no opportunity should be completely neglected, there do not appear to be any major prospects for increased employment in the Manitoba shipbuilding and boatbuilding sector.

6.6 PROSPECTS AND CONCERNS

The major findings of this survey of the Manitoba transport equipment manufacturing industries can be summarized as follows:

1. After the food industries, transport equipment is the second most important manufacturing sector in Manitoba. In 1989, transport equipment manufacturing provided employment for 7,000 Manitobans - 3,600 in the aerospace industry (excluding the Air Canada overhaul base); 1,900 in truck and bus bodies and trailers; 800 in the motor vehicle and associated parts and accessories industries; 350 in railway rolling stock; 200 in

boatbuilding; and 150 in miscellaneous activities. Nevertheless, employment in transport equipment in Manitoba is only about one-quarter of the size of employment in the transport service industries.

2. In 1989, Manitoba accounted for 3.2% of total Canadian employment in transport equipment manufacturing. This is not an extremely high figure, mainly because Manitoba has only a very small role in the production of motor vehicles and associated parts and accessories. With these excluded, Manitoba would have had over 6.9% of the remaining transport equipment manufacturing employment in Canada. However, this is scant recompense since motor vehicles and associated parts and accessories provide nearly 60% of total Canadian employment in transport equipment manufacturing.

3. The Manitoba share of Canadian employment in transport equipment manufacturing was increasing during the 1970s, from 3.1% in 1971 to 3.6% in 1981. Subsequently, the Manitoba performance was less impressive and the share of Canadian employment fell to 2.8% in 1986. This was because increased Canadian employment in transport equipment between 1981 and 1986 was confined to motor vehicles and associated parts and accessories, where Manitoba has only negligible representation. With more difficult times in the automobile industry in recent years, the Manitoba share of transport equipment manufacturing has recovered to a current figure of 3.2%.

4. The transport equipment industry, both nationally and in Manitoba, has a very substantial proportion of employment in large manufacturing establishments. In Manitoba, the six largest establishments - Bristol Aerospace, Boeing, Motor Coach Industries, Standard Aero, New Flyer and Triple E - accounted for 5,000 jobs or 71% of provincial employment in the industry in 1989. There are only four manufacturing establishments in Manitoba which provide over 1,000 jobs and three of these are in transport equipment manufacturing. Another six firms, each with over 100 employees, provide 1,000 jobs in

transport equipment manufacturing. The rest of the employment, also amounting to some 1,000 jobs, was located in smaller establishments.

5. The aircraft and aircraft parts manufacturing industry provided 3,600 jobs in 1989. This does not include the almost 500 jobs in the Air Canada overhaul base examined in Chapter 3. Manitoba accounted for 8.1% of total Canadian employment in aircraft and aircraft parts manufacturing in 1989. The industry is heavily export oriented, relying more on civilian than on military production. Production is diversified, but well over 90% of the employment is provided by three firms - Bristol Aerospace, Boeing and Standard Aero. Winnipeg is now the third most important centre in Canada for aerospace manufacturing. The companies feel that the industry has reached a critical mass size, which can allow self-sustaining growth, but consider that this crucial size has only just been reached and that the continuous efforts to grow of the last few years must not be relaxed.

6. In the truck and bus body and trailer industry, Manitoba accounted for 9.0% of total Canadian employment in 1989. Three large firms - Motor Coach Industries, New Flyer Industries and Triple E - provided four-fifths of the employment.

7. In motor vehicles and associated parts and accessories, Manitoba has a negligible share of total Canadian employment. The two main Manitoba establishments are Temro and Fort Garry Industries, providing some 370 jobs or almost half the province's employment in these activities.

8. In the railway rolling stock industry, Manitoba has two establishments and a modest share of total Canadian employment. However, this is not an important industrial sector and growth prospects are limited.

9. In shipbuilding, boatbuilding and repair, Manitoba employment is confined to the opportunities offered by Lake Winnipeg. Manitoba has only a small part of national employment in this sector and, for geographical reasons, this is unlikely to increase.

The Manitoba transport equipment manufacturing industry has a major problem in its negligible share of employment in motor vehicles and associated parts and accessories. This industry provides nearly 60% of Canadian employment in transport equipment. Without real assistance by the federal government, the province is not going to gain any substantial foothold in this large industrial sector. In 1988, Magna International Inc. located an engine parts plant in Nova Scotia; this is discussed at greater length in Chapter 13 with the obvious implication that, if this can happen in Nova Scotia, there should be some optimism in Manitoba.

The chapter concludes with a statement of recommendations to governments to facilitate the development of transport equipment manufacturing in the province and its growing contribution to the welfare of Manitoba and of Canada.

1. The federal government should:

(a) assist Manitoba to obtain a significant presence in the manufacture of automobile parts;

(b) ensure that the development of the aerospace industry in Manitoba is a prime objective of the Western Diversification Office and that the needs of this industry are adequately considered in the awarding of government defence contracts;

(c) assist the transport equipment industries to find new markets, specifically in the context of the Canada-U.S. Trade Agreement and the effects of "Buy America" policies.

2. The provincial government should:

(a) continue its attempts to achieve a significant Manitoba presence in automobile parts manufacturing;

(b) take action to make Manitoba a centre of excellence in the training of professionals and technicians for the air transport and aerospace manufacturing industries;

(c) work with the bus and recreational vehicle industries to ensure their continued growth in the province;

(d) continue an active lobbying role in respect of the awarding of government defence contracts, pursuing this at the present time as representing a partial offset to the employment losses of military bases now being closed in the province;

(e) maximize the local sourcing of supplies by establishments in the transport equipment industries.

CHAPTER 7: THE USERS OF TRANSPORT SERVICES - PRIMARY INDUSTRIES

Chapters 7 to 9 deal with the users of transport services and their problems in respect of costs and quality of service. Chapter 7 addresses the primary industries - agricultural products, mineral products and other primary products. Chapter 8 deals with manufacturing industry. Chapter 9 examines a number of other issues, including a shipper survey on attitudes toward transport services, the concerns of the Manitoba Regional Development Corporations and a brief review of passenger transport. Each chapter closes with a summary; longer term prospects and concerns are not presented in Chapters 7 and 8, but considered at the close of Chapter 9.

The material in Chapters 7 and 8 was obtained mainly through personal interviews conducted by UMTI staff. In addition, each company interviewed was given the opportunity to review the first draft of UMTI material relating to its operations. The interview procedure was followed partly to ensure an in-depth discussion with industry sectors, which would not be feasible with the use of a postal questionnaire, and partly to meet the TIDAC request that there should be extensive direct consultation with the stakeholders during the course of this study. Although this has proved effective, it was very time-consuming in terms of interview arrangements, travel, meetings and assessment of the results.

The relation of transport facilities to economic growth is not addressed in the chapters on transport users. The transport systems in Manitoba are long established and mature; except for isolated mining developments, transport no longer has its original role of "opening up the country". It is assumed, generally realistically, that transport services will be provided to meet the needs for movement of freight and passengers and that, while poor service or high freight rates can reduce economic growth, the economic development of Manitoba is not being hindered by the non-existence of transport facilities.

Until very recently, this assumption would have been sufficiently self-evident for almost universal acceptance. However, with the enactment of the 1987 National Transportation Act, there is now a question as to the speed of construction of new branchlines needed for resource development. This is because the new legal requirements for competitive line rail rates mean that the traffic generated would no longer be captive to the railway making the investment to construct a new branchline. This issue is examined in Chapter 12.

The present chapter starts with an examination of the importance of transport costs to the primary producers of Manitoba. Agricultural products, mineral products and other primary products are then reviewed seriatim in respect of patterns of transport use and concerns, with this followed by a chapter summary.

7.1 TRANSPORT COSTS IN RELATION TO PRIMARY PRODUCTION

The sources of Manitoba's gross provincial product were reviewed earlier in Chapter 1. The goods producing industries are responsible for a much smaller proportion of gross provincial product than the service producing industries and this is typical of all advanced economies. The basic economic activity derived from agriculture, other primary resources and manufacturing amounted to 20.3% of Manitoba's gross domestic product in 1988. Table 7.1 shows details of this activity. (The mining line of the table includes fishing, furs and forestry for all figures except value of sales.)

Agriculture provided 24% of the total value added in Table 7.1, with this estimate including an adjustment for the effects of drought in 1988, and mining and other primary industries provided 15%. Chapter 7 is therefore examining transport costs in relation to two-fifths of this value added, while Chapter 8 will be looking at the manufacturing sector with the remaining three-fifths of value added.

Table 7.1: Manitoba Primary and Manufacturing Production - 1988

	Value of Sales $ millions	Value Added $ millions	Value Added %	Employment thousands
Agriculture	1,908	962	24	37
Fishing	25			
Furs	5			
Forestry	60			
Mining	1,679	605	15	10
Manufacturing	6,306	2,524	61	63
Total	9,983	4,091	100	110

Source: Manitoba Department of Finance "Manitoba Economic Statistics", June, 1989. "Value added" is used as a loose description of gross domestic product at factor cost. The crop component of agriculture relates to 1987 to avoid the effects of the 1988 drought.

Table 7.2 shows value of sales within the various crop and livestock categories of agriculture in Manitoba. The estimates of transport costs are based on UMTI interviews and give a general indication of the impact of transport costs in different sectors. Transport costs as a percentage of the value of sales can change, not only as a result of changes in transport costs, but also as a result of changes in the value of the products transported. Fluctuations in product selling price are a particularly difficult problem in primary production, with the result that the ratio of transport costs to the value of sales can vary considerably from year to year.

Table 7.2: Value of Sales and Transport Costs - 1988

Manitoba Agricultural Production

	Value of Sales $ millions	Transport Costs as % of Value of Sales Inbound	Outbound	Total
Wheat	395		3	3
Coarse grains	162		5.5	5.5
Oilseeds	237		1.5	1.5
Special crops	62			n/a
Horticulture	95	5	9	14
Other crops	185			n/a
Total crops	1,136			
Cattle and calves	290	2	*	2
Hogs	228	3	*	3
Dairy	129	4.5	*	4.5
Poultry and eggs	123	1*	3*	4*
Sheep	2			n/a
Total livestock	772			
Total agriculture	1,908			

* Product is delivered to processing plant.

Source: Value of sales from Manitoba Department of Finance "Manitoba Economic Statistics", June, 1989. For crops, 1987 figures are used to avoid the effects of the drought; livestock figures are 1988, which were higher than 1987. Transport costs based on UMTI interviews.

Transport costs in relation to value of sales for grain are calculated as the rail freight rate paid by the shipper from Carberry, Manitoba to Thunder Bay, expressed as percentages of the mid-1988 prices of grains at Thunder Bay. These freight rates paid by the producer under the Western Grain Transportation Act (WGTA) are substantially subsidized by government. In the crop year 1988/89, the freight rates would otherwise have been four times as high in relation to product value, for example 12% instead of 3% for wheat.

Freight rates are the same per tonne for movements of different types of grain over the same distance. However, the freight rate burden is obviously greater in relation to product value for low priced coarse grains than for wheat, while it is much less for higher priced oilseeds. Many of the special crops also move under WGTA rates and in general the freight rate burden on these products would be less than for wheat. The figures shown for horticulture relate to the inbound transport costs of assembling product in Winnipeg, while the outbound transport costs of unprocessed products tend to be high for markets which are often out of province.

In the livestock category, the inbound transport costs relate to the assembly of product by marketing boards. The only outbound transport cost shown relates to the distribution of eggs, where a large proportion are marketed out of province. Transport costs from the marketing board to processors in respect of cattle, hogs and poultry are treated under manufacturing in Chapter 8. In the case of dairy products, the transport costs cover delivery from the farm to the processing plant; the outbound costs from the processing plant to the customer are considered later as manufacturing.

The present section has not considered inbound transport costs incurred on the inputs used by agricultural producers, but these are obviously much less important than the transport costs incurred in marketing the agricultural production. With the exception of horticultural crops, where potatoes account for over half of the value of sales, transport costs in the agricultural sector are fairly modest in relation to sales. However, this conclusion needs two modifications. Firstly, if the producer were paying the full cost of moving grain to export position at Thunder Bay, transport costs would be far higher in relation to the value of sales. Secondly, in the livestock area apart from eggs, the transport costs shown in the table relate to the costs of taking the product from the farm to the processing plant and do not include the costs of distributing the processed product.

Table 7.3 shows the value of sales and transport costs for the mining industry. Prices of metals fluctuate so much from year to year that the measure of transport costs as a percentage of value of sales can fluctuate considerably. As metal prices were extremely high in 1988, the calculations in the table of transport costs as a percentage of value of sales relate to 1987, which seems more typical.

Table 7.3: Value of Sales and Transport Costs - 1988

Manitoba Mineral Production

	Value of Sales	Transport Costs as % of Value of Sales		
	$ millions	Inbound	Outbound	Total
Nickel	1,090			*
Copper	171	)3.5	4.5	8.0
Zinc	94	)		
Gold	74			n/a
Other metals	43			n/a
Industrial minerals	125	-	20	20
Petroleum	82	-	2.5	2.5
Total minerals	1,679			

* Not available, but much less than for copper and zinc because of the higher value of nickel.

Source: Value of sales from Manitoba Department of Energy and Mines. Transport costs based on UMTI interviews.

Apart from the transport costs on purchased inputs, inbound transport costs cover mainly the movement of low value product from the mines to the central refining plant - in Thompson for nickel and in Flin Flon for copper and zinc. Distances travelled in the outbound movement are very substantial, but product value is greatly increased. Although it was not possible to establish precise figures for nickel, from the relative prices of nickel and copper, transport costs were probably of the order of 4% of the value of sales in

1987. With the vast rise is nickel prices in 1988, transport costs could not have been higher than 2% of the value of sales in that year. When compared with products such as coal, transport costs in relation to product value are fairly modest in the Manitoba mining industry.

For industrial materials, the figures in the table were based on visits to quarries. There are no inbound transport costs, as the product is mined on site but, for reasons described in section 7.3, outbound transport costs are extremely high. The modest outbound costs for the transport of petroleum produced in Virden cover only the cost of reaching the main pipeline of Interprovincial Pipe Lines.

The next table shows transport costs for fishing and furs; the forestry industry is addressed according to product use in the appropriate manufacturing sectors of Chapter 8.

Table 7.4: Value of Sales and Transport Costs - 1988

Other Manitoba Primary Production

	Value of Sales $ millions	Transport Costs as % of Value of Sales Inbound	Outbound	Total
Fishing	25	1	5	6
Furs	5	n/a	1	1
Forestry	60			
	90			

Source: Value of sales from Manitoba Department of Natural Resources. Transport costs based on UMTI interviews.

Inbound transport costs for the fishing industry are very low. This is because half the value of the fish taken in Manitoba come from Lake Winnipeg, with a further 15% from Lake Manitoba. The proportion of fish which are flown from isolated northern lakes is surprisingly small. Many fish shipments travel considerable distances with the result that outbound transport costs are more substantial. Furs are of very high value in relation to weight and transport costs are not an important factor.

7.2 AGRICULTURAL PRODUCTION

The importance of agriculture in the Manitoba economy has already been summarized earlier in this chapter. Agriculture accounts for some 24% of the value added in the goods producing industries of Manitoba and provides 37,000 jobs. The purpose of the present section is to summarize the various meetings held in respect of transport and agriculture, to give a brief survey of the methods of transportation used and to indicate the concerns expressed by users. This is also the approach in the subsequent sections of this chapter dealing with mining and other primary products and in Chapter 8 in respect of manufacturing industry. The present section starts with crops and then proceeds to the livestock categories. Comments are not offered on special crops and other crops, because of their diversity; sheep were not examined, as they are such a small part of livestock production.

7.2.1 Wheat, Coarse Grains and Oilseeds

Interviews were held with a considerable number of representatives of grain elevator companies and with Regional Development Corporations, several of whose members were farmers. Export grain is, of course, delivered by truck to the country elevator and then transported by rail to the ports - in the case of Manitoba, mainly Thunder Bay. Under the Western Grain Transportation Act (WGTA), the producer paid only 30% of the freight cost by rail in the crop year 1989/90 and this effectively prevented long haul truck competition. For some eight years, there has been keen debate in the prairies as to whether the government subsidy on the movement of grain should be paid to the railways as at present or paid directly to the producers. This is addressed later as a policy issue in Chapter 10.

As a result of the greater profitability of grain to the railways under the WGTA, there were few complaints from the elevator companies on the quality of rail transport for grain and no complaints were noted on this score in the interviews with the Regional Development Corporations. There are concerns as to the effects of branchline abandonment on the state of the roads, which have been addressed in Chapter 4. This seems to be the sum total of the transport concerns in respect of export grain.

The domestic use of grain is considered as manufacturing industry in Chapter 8, mainly under animal feed and other food, which includes oilseed crushing.

7.2.2 Horticulture

The Manitoba Vegetable Producers' Marketing Board, which was established in 1972, represents 75 Manitoba producers in the sale of root crops under a supply management system. Vegetables not under the program are also distributed. The Board employs 32 people and 9 member producers sit on the Board of Directors. Producers are paid on a pool basis, i.e., sales are grouped and prices are averaged.

Although the vegetables are delivered f.o.b. Winnipeg, inbound costs are relatively high as a percentage of product selling price. This is because the product tends to be bulky and of low value. Truck transport, most of which is private carrier, is used exclusively for inbound shipments.

Outbound shipment costs are also high because the product retains the original characteristics and deliveries to markets outside Manitoba involve considerable distances. The major mode is truck transport but there are substantial movements by piggyback in order to lower freight costs, sometimes by as much as 50%. Some eastern markets such as Toronto would not be accessible without the cost savings of intermodal service.

Quality of service factors are very important because the product is time-sensitive by its very nature and must travel in a temperature-controlled environment. Although the Board feels captive to truck transport, it does enjoy good, reliable service as a result of being able to offer full, one-drop loads on a consistent basis. Instrument monitoring of loads and the assistance of Agriculture Canada inspectors have contributed to maintaining and improving the quality of service provided by the carriers.

There is great deal of uncertainty regarding future sales and therefore future transport requirements. Concerns include losing markets in Alberta and Saskatchewan to local producers and the shift in Southern Ontario from tobacco to vegetables. The Free Trade Agreement offers some potential for new markets.

7.2.3 Cattle and Calves

The notes below cover only the transport of live animals as meat is covered later in Chapter 8.

The Manitoba Beef Commission was established in 1983 to administer the beef stabilization and marketing plan on behalf of the 6,100 Manitoba beef producers who have entered into a voluntary contract with the provincial government. In return for a levy based on prices and volumes moved by the individual producer, the government funded program serves to stabilize incomes for the participants. As a marketing agent, the Commission informs the participants of potential buyers, destinations and prices. The Commission has detailed records of cattle movements to the processing plants and the consequent shipments of dressed beef to consumer markets, but is not directly involved in the purchase of transport services. Between 30 and 40% of the cattle produced and marketed in Manitoba move through this central selling agency.

Of the cattle and calves marketed by the Beef Commission, roughly 20% are exported to the U.S. and between 5 and 10% are shipped to Western Canada. The balance of 65 to 70% of marketings is in Manitoba. Transport to packing plants in the province is mainly by farmer owned trucks, with perhaps 15% of the movement by contract carrier. The cattle industry is sensitive to freight costs, but quality of service factors are more important in the transport of live animals. The Commission believes that the regulations governing the transport of live animals should be revised for humane reasons in respect of such factors as the size of the transport units, speed of delivery and distance to markets. In addition to the need for revision on humane grounds, animals subjected to unnecessary stress in transport often yield lower returns for the producer.

7.2.4 Hogs

Manitoba Pork, which is the producers' Marketing Board, collects and sells hogs to the Manitoba slaughtering plants located in Winnipeg and Neepawa. Approximately 36,000 hogs are sold each week, with over 80% of these assembled in Winnipeg; Brandon is the other assembly point. However, some producers deliver directly to the plants in Winnipeg and Neepawa with the consent of the Board. Some live hogs are shipped to Saskatchewan, Alberta, Ontario and the United States.

Truck transport, privately owned and for-hire, is used exclusively for moving live hogs from the farm to the collection points. The Board believes that truck transport is competitive and reasonably priced and that the carriers have accommodated the producers with good, reliable service.

Quality of service factors are very important because the live animals are susceptible to stress due to extremes in temperature. Improper loading and handling could cause injury or loss. Although insured against dead and damaged hogs, the producer may not receive full compensation for his loss. Once a live animal has been placed in the holding pen, it should not be returned to point of origin. It is for these reasons that dependability of the carrier is so crucial.

Transport requirements both in Manitoba and out-of-province will increase with greater production of pork and pork products. There are major and innovative marketing programs underway to emphasize the leaner meat and nutritional attributes of pork.

7.2.5 Dairy Products

The Manitoba Milk Producers' Marketing Board is the sole collection agency for fluid milk produced in Manitoba. The Board contracts with 26 individual carriers, operating 59 trucks to bring approximately 250 million litres of milk annually to 14 processing plants located in Manitoba. The plants range in size, with the two largest plants located in Winnipeg. Milk is delivered f.o.b. the plant and the Board's involvement ends at this point.

Ensuring quality service and reviewing freight costs with its carriers are some of the primary functions of the Board. Due to the nature of the product, transport is entirely by insulated tank trucks. In order to have a bulk milk hauler's license, the carrier must have a contract with the Marketing Board. The transport equipment cannot normally be used for any purpose other than milk hauling. The driver carries the responsibility of metering and grading the milk and must be a provincially licenced milk grader, accepting responsibility for the quality of milk delivered to the plant.

The Board believes that there is a need for the transportation industry to be more innovative. Additional demands will arise as the agricultural producers face the cost crunch associated with markets, finance and labour. Technological changes are inevitable, e.g., water removal to reduce costs and vacuum loading and unloading. To reduce transport costs, larger units will have to be used. Within three years an ongoing computerized route rationalization system will be in place. Corresponding changes will have to be made at the unloading facilities as well as the individual farm yards.

7.2.6 Poultry and Eggs

The Manitoba Chicken Broiler Producers' Marketing Board and the Manitoba Turkey Producers' Marketing Board, which were established approximately twenty years ago, represent 136 chicken producers and 85 turkey producers, respectively. Chicken and turkey production are under a national supply management program administered by the Canadian Chicken Agency in Ottawa and the Canadian Turkey Agency in Toronto. The agencies determine the national production levels and then allocate what share the provinces will produce. The Manitoba Boards are responsible for setting the minimum producer price for over 25 million kilograms of live chickens and over 10 million kilograms of live turkeys annually.

The poultry processors buy directly from the producers and the price, determined by the Boards, is f.o.b. the farm. Transport costs are incurred by the processors and therefore appear in Chapter 8. Since 1975, the Boards have also been involved in the movement of eviscerated poultry products to Japan. About 180,000 kilograms of product, mostly turkey, move annually by refrigerated container to Vancouver, where these containers are loaded directly onto the ocean vessels. Although the market is still small, it has considerable potential for growth and allows more generous quotas for Manitoba production.

Manitoba poultry producers were strongly opposed to the Free Trade Agreement. They felt that the family farm operation cannot compete against the vertically integrated organizations in the U.S. Manitoba costs of production are considerably higher because of climatic conditions and wage rates. There was concern that huge processing firms could shut down their Canadian operations. The producers' position is further threatened by the possible removal of Article 11 of the GATT, which restricts the influx of imports.

The Manitoba Egg Producers' Marketing Board, which acts on behalf of 260 egg and pullet producers, was established in the early 1970s and is associated with the Canadian Egg Marketing Agency under a federal-provincial agreement. In Manitoba eggs are produced under a supply management program and the Board is responsible for setting minimum prices paid to egg producers, marketing activities and administering and allocating quotas. Unlike other provinces, Manitoba's egg quotas are a non-tradeable commodity and are attached to the physical assets involved in egg production. Manitoba's share of egg production was determined at the onset of the agreement at 11.4% of the total Canadian production; this is much higher than the share of Canadian population and reflects the long-established position of the province as an exporter of eggs.

Egg production is concentrated in south-eastern Manitoba and in close proximity to major centres like Winnipeg and Brandon. There are seven grading stations in Manitoba, five of which are located in Winnipeg, and the eggs move directly to these grading stations either by contract carrier or by farmer owned vehicle. These transport costs represent approximately 1% of the product selling price. The distribution of eggs beyond the grading stations is one-third for fresh table consumption in Manitoba; one-third for further processing; and one-third for consumption outside the province. There are virtually no shipments of fresh eggs to the U.S. Interprovincial transport costs represent just over 5% of the product selling price while intraprovincial transport costs represent .5 to 2% of the product selling price. Susceptibility to damage, especially for the longer hauls, is minimized by the use of air ride trailers and temperature controlled units.

The Free Trade Agreement will require Canadian egg producers to make some adjustments to accommodate increased imports and reduced tariffs.

7.3 MINERAL PRODUCTION

The discussion of transport profiles and concerns in this section covers nickel, copper and zinc, industrial minerals and petroleum. Technically, some of the mining output discussed below can be classified as manufacturing production. However, it would not be helpful to split examination of this industry between mineral production and manufacturing, so the entire mining industry is reviewed in this section and excluded from the discussion of manufacturing in Chapter 8. There are similar problems with industrial minerals in defining when mining ends and manufacturing begins; quarries are examined in the present section, but cement manufacturing is postponed to Chapter 8.

7.3.1 Nickel

Inco Ltd. in Thompson provided 1,900 jobs in the mining and processing of nickel, when interviewed in late 1988. Trucks with a load capacity of 85 tons are used to haul the ore from the open pit located near the 30 year old Thompson processing plant and from the other relatively distant sites. Since 1986, the Thompson plant has had the benefit of decreased outbound transport costs due to the availability of cheaper backhaul rates; specially equipped trucks hauling cement to the Limestone Project return with a load of nickel product.

Inco maintains control over inbound and outbound shipments in that everything is shipped prepaid and received collect. In this way, the management can specify which carriers are used and what rates are paid. The firm no longer felt captive to rail and cited the example of how it was cheaper to ship soda ash by truck 1,600 miles from Green River, Wyoming.

Outbound shipments from the Thompson facility involve product at different stages of processing: nickel aggregate to Fort Saskatchewan; nickel anodes to Port Colborne; and copper ingots to Copper Cliff. In addition to final processing of nickel anodes, Port Colborne serves as the distribution centre for shipments to overseas destinations. Only about 8% of the outbound materials move by rail, most of which is the aggregate shipped to Fort Saskatchewan, and 92% of the outbound shipments move by truck.

For-hire truck transport was the major mode for inbound and outbound shipments because the management at Inco considered the railways to be insensitive to customer needs. Piggyback service to Thompson had been eliminated and there were only two trains per week serving Thompson. Good backhaul rates had been negotiated with motor carriers for movements to Eastern Canada and interlining often took place with other carriers in Winnipeg.

It is difficult to obtain an accurate figure of transport costs in relation to product value for nickel because of vast fluctuations in the price of nickel. In 1987, total distribution costs amounted to 15% of product value, but this definition was far wider than just inbound and outbound freight. The price of nickel in October 1988 was $5.13 per lb., against $1.69 a year earlier. This reduces the usefulness of the traditional measure of transport costs as a percentage of selling price.

The Mining Association of Manitoba, Inc. of which Inco is a member has lobbied the provincial government in regards to vehicle weights and dimensions. Mining has stimulated the development of transport networks in Northern Manitoba and transport costs are a major component in determining the feasibility of a mining operation. In order to maintain the competitive position of mining companies in world markets, the Mining Association has argued that the provincial government should extend to Northern Manitoba the RTAC recommendations on truck weights and dimensions in Northern Manitoba, which were discussed in Chapter 4.

7.3.2 Copper and Zinc

Hudson Bay Mining and Smelting Co. Ltd. (HBMS), which began production in 1930, operates three mines in the Flin Flon area and six mines in the Snow Lake area, located approximately 120 kilometers east of Flin Flon. Most of the ore transported from the outlying mines to the mill moves by truck. The Trout Lake mine near Flin Flon is a joint venture with the Manitoba Government, Granges Exploration (Vancouver) and Outokumpo Oy (Finland). Operations at Snow Lake commenced in 1958 and a concentrator was built there in 1979 to supplement the processing facilities at Flin Flon. Including the various mines, the concentrator at Snow Lake and the metallurgical plant in Flin Flon, HBMS provided jobs for over 2,000 northern residents in late 1988.

Although HBMS is primarily a producer of copper and zinc, the company in association with Outokumpo Oy is also developing a nickel mine at Namew Lake. It is expected that some 40% of the nickel ore will be trucked to Inco in Thompson and the remainder will move by rail to the Sherritt Gordon mine in Fort Saskatchewan.

The major mode for outbound shipments is rail; copper anodes are shipped to Montreal and the zinc slabs are destined for markets in Hamilton, Toronto, Brampton, Chicago, Pennsylvania, Montreal and Vancouver. HBMS is not totally captive to rail transport, as truck backhaul rates have been used for negotiating leverage, but headhaul rates are far too expensive. Confidential rates have been negotiated, but HBMS feels somewhat disadvantaged in not knowing what rates the competition has obtained. Overall, a good business relationship exists between HBMS and CN Rail.

It can be misleading to express transport costs as a percentage of product value. For example, copper was priced at $1.40 per lb. in October, 1988 and had been as low as 80 cents per lb. two years earlier. On 1987 figures, transport costs amounted to approximately 8% of product value, with inbound costs at 3.5% and outbound costs at 4.5%.

7.3.3 Industrial Minerals

This includes stone quarries and two firms were visited in Eastern Manitoba. Inbound freight costs are non-existent as stone is mined at the quarry site, but outbound transport costs can amount to 20% or more of product value.

Gillis Quarries employs 50 people and produces Tyndall Stone at Garson, Manitoba. There are no inbound transport costs as the entire cutting operation occurs at the site, which is about thirty miles from Winnipeg, but outbound transport costs are very high. Despite these difficulties, Gillis Quarries continues to market the unique properties of Tyndall Stone with considerable success.

The producer has complete access to rail service but prefers to use intermodal and truck transport, partly because volumes on many orders are too small for the efficient use of rail service. On larger orders, packing is costly on rail movements because of the need to prevent damage in the shunting of rail cars. In addition, the switching from rail to truck for final delivery produces more damage, slower delivery times and less flexibility.

Manitoba is the largest consumer of Tyndall Stone, followed by Saskatchewan, Alberta and British Columbia. There were also large shipments to build the new museums in Ottawa-Hull and the intermodal rates negotiated in this instance were lower than for rail transport. Truck transport is the major mode for intra-provincial shipments and is considered to be a good, reliable service with competitive freight rates. Interprovincial shipments to Western Canada are also mostly by truck. In the last few years the shipper has been able to negotiate lower rates due to the availability of backhaul of western lumber.

The management at Gillis Quarries expressed concerns over the invisible barriers they face in trying to market their product in the U.S. They believe that they have a unique product and that any regulations that impede their progress in seeking out these markets should be eliminated.

Cold Spring Granite (Canada) Ltd., which employs 24 people, is located near Lac du Bonnet and is a subsidiary of a U.S. company headquartered in Cold Spring, Minnesota. There are virtually no inbound transport costs because the stone is quarried at the site. Some final processing is done at the plant to accommodate Canadian sales, but 75% of the granite is shipped to the parent plant in Minnesota in rough form.

Transport costs expressed as a percentage of selling price are very high because the product is bulky and relatively low in value. Lower customs tariffs from the Free Trade Agreement could be conducive to the movement of finished product to the U.S. The traffic department at the head office in Cold Spring negotiates freight rates for the entire organization.

All finished product sold in Canada moves by truck; this includes one company owned truck for local deliveries. Approximately one-half of the stone shipped to the U.S. moves by truck transport, often enjoying backhaul rates. The remaining shipments move by gondola rail cars that are loaded at Whitemouth, Manitoba, which is sixteen miles away. Truck transport provides a good service to the producer; rail tends to be somewhat slower. There are no problems with weight restrictions and there is adequate equipment available to handle the high density loads.

7.3.4 Petroleum

The Virden area is the centre of the Manitoba petroleum industry and has been a source of crude oil for several decades. Chevron is the only major oil company producing in the area, but the UMTI interview was with Mead Petroleums and Farms Ltd., a major independent producer of light crude oil in Cromer, Manitoba. Mead employs five full-time workers and Crown Drilling Ltd., which Mead owns in partnership, employs about 40 local residents. The industry has faced major rationalization since world oil prices fell several years ago and the management is concerned about how much longer they can continue operations at the current low prices.

The crude oil pumped from the individual wells is conveyed by underground pipeline to the battery site. The battery is an operator-owned collection point for crude oil which serves to remove water and sand from the crude oil prior to sale. Failure to meet certain minimal specifications results in dockage.

All of the crude oil produced by Mead Petroleums moves to the Interprovincial Pipe Lines (IPL); 60% of it moves by for-hire truck and the balance moves by underground pipelines that connect directly with the huge storage and pipeline facility owned by IPL. The IPL major terminal is connected to the Trans-Canada Pipeline with spurs to the United States. The cost of transporting Mead's crude oil to the IPL facility using for-hire truck transport represents approximately 3% of the product selling price. Moving the oil by underground pipeline represents 1.5% of the product selling price; this low cost is possible only because the lines were constructed a long time ago.

Mead's transport requirements are not likely to change in the next decade or so. The service provided by the contract carrier is reliable and, with recent competition, reasonably priced. There is some optimism that the Free Trade Agreement will not harm the oil producers and may even be of some benefit. Oil producers would like to see the price of crude oil settle between eighteen and twenty dollars per barrel; at this price their profitability and long term viability would be improved immensely.

7.4 OTHER PRIMARY PRODUCTION

This sector of the economy covers fishing and furs, with forestry examined in Chapter 8 as an input to the manufacturing sector. Other primary production, including forestry, accounts for only 1% of the total value of sales in the goods producing industries of Manitoba.

7.4.1 Fishing

The Freshwater Fish Marketing Corporation was established in 1969 to market fish and fish products from Manitoba, Saskatchewan, Alberta, Northern Ontario and the North West Territories. The Winnipeg location is central to the collecting process.

Inbound freight costs are not considered a serious impediment to the operation. The movement is predominantly by refrigerated truck transport. A large portion of the raw fish is obtained from sources reasonably accessible to the plant in Winnipeg. The cost of moving fish greater distances from Alberta and the North West Territories has been ameliorated during the last five years through an arrangement negotiated with carriers for low backhaul rates.

Outbound shipments consist of fresh, frozen and processed fish and fish products. Fresh fish is especially time sensitive in terms of maintaining physical characteristics and being at the market place on time. All forms of the shipped product must move in a temperature controlled environment for obvious reasons. The market for the shipped products is generally a long distance from the plant, with some 57% of shipments to the U.S., and outbound freight costs must be rigidly monitored and controlled to remain competitive in these markets.

The largest portion of the outbound movement is by motor carriers equipped with insulated refrigerated vans. The specialized type of equipment required to move fish and fish products and the difficulty for the carrier in ensuring adequate return loads precludes the obtaining of low rates which might otherwise be available. The Corporation recognizes the problems inherent in this type of operation and has negotiated arrangements with a number of carriers which it feels are not unreasonable under the circumstances. Approximately 5% of shipments to the U.S. move by rail to Montreal and then by motor truck to markets in New Jersey and New York. The intermodal service provided by the railways is judged to be very good and reliable. Air freight is used for some outbound shipments to Los Angeles and major Canadian cities.

7.4.2 Furs

Native trappers in Northern Manitoba supply most of the raw furs destined for local markets and the distant markets in Eastern Europe and the Orient. Trapline licenses and quotas on certain species of fur bearing animals are issued by the Manitoba Department of Natural Resources. Trappers can either pool their furs and deliver them to the buyers in Winnipeg or sell to the numerous fur company stores operating in Northern Manitoba. Two major buyers of raw furs are the Winnipeg Fur Exchange and Hudson's Bay Raw Fur Buying.

Four-fifths of Manitoba furs are exported, of which roughly one-third go to the United States and two-thirds to Europe and Asia. The major auction houses are located in Toronto but there are some located in Winnipeg, North Bay and Montreal. Furs for export are not tanned in order to avoid the higher duties on finished product. There are tanning facilities in Winnipeg, Toronto and Montreal for domestically sold product.

Transport costs generally represent less than 1% of the product selling price. On North American sales, for-hire truck moves 70% of the product, piggyback 25%, and air the remaining 5%. On overseas sales, containerized air freight is the major mode, with the balance by containerized ocean freight.

7.5 SUMMARY

The final section of this chapter summarizes the material collected from interviews with Manitoba primary producers in respect of their use of transport services. Prospects and concerns are postponed until the last section of Chapter 9.

1. Of the gross provincial product in Manitoba, 20% is provided by primary and secondary industries - agriculture, mining, fishing, furs, forestry, and manufacturing. Of the total value added by these industries in 1988, 24% is accounted for by agriculture, 15% by mining and other primary industries and 61% by manufacturing.

2. Transport costs obviously have a more important influence on the location and economic feasibility of an industry when they constitute a large proportion of the selling price of the product. An attempt was made to quantify the inbound and outbound transport costs in relation to product value for the various goods producing industries in Manitoba. Two warnings should be issued in respect of this measure. Firstly, the burden of transport costs in relation to product value can increase or decrease, sometimes very substantially, without any change in transport costs, because of changes in the value of the product being transported. Secondly, there can be an increased or decreased burden of transport costs without any change in product value or freight rates; if more distant markets are served, this increases the burden of transport costs, while a shift towards geographically closer markets reduces this burden.

3. Transport costs can be a substantial proportion of the product price in relation to agricultural crops. An examination of the vegetable industry has shown inbound and outbound transport costs equivalent to 14% of the product value, reflecting the fact that

root crops in particular have low value in relation to weight. Grain transport costs are subsidized by government under the Western Grain Transportation Act and, in the crop year 1989/90, the shipper bears only 30% of the cost of transporting grain from the country elevator to the terminal elevator. These rail rates amount to between 1.5% and 5.5% of product value, but would be much higher if the shipper had to bear the full rail costs. For livestock products, the producer bears only the transport costs from the farm to the processing plant and these are comparatively modest, running in the range of 3-5% of product value. Outbound transport costs after processing are considered under manufacturing industry in Chapter 8.

4. Because prices of metals fluctuate so much, the measure of transport costs as a percentage of value of sales can be very misleading. Data for 1987 showed inbound and outbound transport costs as amounting to some 8% of product value for copper and zinc mining; for nickel, the transport burden was about 4% in 1987. If figures had been presented for 1988, following the vast increase in metal prices that year, the transport burden would have been roughly halved in relation to the value of sales for all these metals. Transport costs to reach the facilities of Interprovincial Pipe Lines are fairly modest for petroleum. Industrial minerals are a product group where transport costs are particularly high, amounting to as much as 20% of product value, because the product is of low value in relation to weight.

5. Transport concerns of Manitoba shippers were reviewed. The transport of grain to Thunder Bay and Churchill is by rail at rates determined under the Western Grain Transportation Act, with 70% of the cost of movement covered by government payments. The quality of grain transport has improved considerably since grain became a profitable commodity to carry for the railways. Vegetables move predominantly by truck transport and, although there are concerns as to future markets for these products, there seems to be general satisfaction with transport quality and rates. In respect of livestock, slaughter animals and dairy products are all moved by truck from the farm to processing facilities.

Although technical change is envisaged in transport, particularly in respect of milk, there is a general satisfaction with the quality of truck transport presently being used.

6. Truck transport is used to a considerable extent in the transport of shipments from the mining industry. Mining products would not justify truck transport without a reasonably remunerative fronthaul from the south; the fronthaul was provided by truck traffic carrying materials for the construction of the Limestone Project and this should continue with the recent decision to commence construction of the Conawapa Project. Of the two major mining operations in the north, one was reasonably satisfied with freight rates and quality of rail transport, but the other was much more critical. The quarry products of the industrial materials sector of the mining industry moved predominantly by truck, although rail transport is used on the longer hauls. Petroleum from the Virden area is moved to the pipeline facility of Interprovincial Pipe Lines and there did not seem to be any transport problems.

7. Truck rates for outbound fish movements were considered to be fairly high, but it was recognized that this was partly due to the need to use specialized equipment and the difficulties in obtaining return loads. Although there is only a small movement of fish by rail, the quality of the intermodal service to Montreal by rail and then by truck to the United States was quite favourably regarded. In the fur industry, product is of very high value in relation to weight and transport is not as an important issue. Forestry will be examined later in Chapter 8.

8. As an overall conclusion, primary producers have to be very conscious of transport costs and are anxious to ensure that they benefit in terms of lower freight rates and better service from all improvements in transport operations and technology. However, apart from this, there were really very few strong user complaints in the primary sector. Producers seem to accept that some low value products will incur relatively high transport costs, with industrial materials and vegetable root crops as specific examples. In respect

of grain, all other issues are insignificant compared with the future of the Western Grain Transportation Act. The mining industry is no longer captive to rail and transport costs are less important in relation to product value when product prices are high. However, one northern mining company gave perhaps the strongest complaints on rail service of all users interviewed in the course of the study. The fishing industry incurs considerable cost in outbound shipments, but this is a specific problem under examination by the industry rather than a general issue.

CHAPTER 8: THE USERS OF TRANSPORT SERVICES
- MANUFACTURING INDUSTRIES

This chapter considers the users of transport services in the manufacturing industries and their problems in respect of costs and quality of service. As in Chapter 7, the material was obtained almost entirely through personal interviews conducted by UMTI staff and the reasons for this approach have already been explained. A total of 40 Manitoba manufacturing firms were interviewed; this excludes two firms which are now no longer in business and two firms which refused to have any material included in the present text. Most of the interviews took place in 1988 and in mid-1989 each firm interviewed was shown the preliminary UMTI draft relating to its operations in order to avoid the inclusion of inaccurate or confidential information. UMTI very much appreciates the prompt and constructive responses which were received.

Chapter 8 starts with a discussion of transport costs in relation to manufacturing production. This is followed by three sections which review the individual manufacturing industries and their use of transport. The chapter concludes with a summary, but longer term prospects and concerns are not considered until the close of Chapter 9.

8.1 TRANSPORT COSTS IN RELATION TO MANUFACTURING PRODUCTION

In the previous chapter, it was shown that the manufacturing industries account for three-fifths of the goods output of Manitoba which enters into the provincial economic base. Detailed figures of industrial production in 1988 are presented in Table 8.1, together with sub-divisions of the food and beverage sectors for an earlier year, as 1988 figures are not yet available for sub-sectors.

Table 8.1 also shows transport costs as a percentage of product selling price for the various industrial groups. These figures are orders of magnitude rather than precise measures. Although UMTI has conducted interviews with shippers and obtained transport data for each product group, there is obviously no guarantee that all shippers in a product group will reflect the structure of transport costs identified. No industrial sector is uniform in the pattern of receipt of inputs or the markets for outputs and consequently in the burden of transport costs. In some industrial groups, for example soft drinks and machinery, the patterns of transport costs do not vary much between firms. In groups, such as "other food", there is heterogeneity by definition. This also extends to other groups; for example, paper and allied products consists of paper producers with very heavy outbound transport costs and producers of corrugated cardboard containers, whose outbound costs are quite modest.

Product selling prices for manufacturing industries do not fluctuate from year to year to the same extent as prices of primary products. This gives greater stability to the ratio of transport costs to product price. However, figures which are accurate for outbound transport costs in one year may not be accurate in subsequent years, if an industrial sector starts selling increasingly in long distance markets; similarly, inbound transport costs would vary if sources of raw material changed. The ratio of transport costs to product price is a useful means of identifying transport sensitive industries, but is never a definitive measure.

Table 8.1: Value of Sales and Transport Costs - 1988

Manitoba Manufacturing Production

	Value of Sales	Transport Costs as % of Value of Sales		
	$ millions	Inbound	Outbound	Total
Foods, of which	1,592			
Meat and poultry	771	2	4	6
Fruit and vegetable	143	*	2	2
Dairy products	205	*	5	5
Animal feed	142	7	10	17
Other food	419	3	4	7
Beverages, of which	146			
Soft drinks	84	0.5	2.5	3
Alcoholic beverages	98	1	1	2
Plastic products	118	4	5	9
Clothing	400	1	1.5	2.5
Wood products	211	1.5	3	4.5
Furniture and fixtures	144	5	5	10
Paper and allied products	308	1	6	7
Printing and publishing	454	1	2	3
Primary metals	643	#	#	#
Fabricated metals	390	3	4	7
Machinery	279	2	2	4
Transport equipment	608	#	#	#
Electrical and electronic products	337	1.5	3.5	5
Non-metallic minerals	160	10	15	25
Chemicals and products	214	6	12	18
Other	234	n/a	n/a	n/a
Total	6,238			

*Inbound transport costs are incurred by primary producers, who deliver to the plant, and are included in Table 7.1.

#The primary metals group is discussed mainly under mining in Chapter 7 and transport equipment is covered in Chapter 6.

Source: See overleaf.

Source: Preliminary value of 1988 sales from Statistics Canada 31-001. Sub-category figures for food and beverages are 1986 figures from Statistics Canada 31-203 and therefore do not add to the 1988 category totals for food and beverages. Plastic and textiles are UMTI estimates. Clothing includes leather and textile products. Other includes the Statistics Canada category of other and also tobacco, rubber, primary textiles and refined petroleum and coal, where figures are confidential. Transport costs based on UMTI interviews.

Transport costs in relation to the value of sales are usually higher in Manitoba than figures quoted in the literature for other areas in North America. This is not surprising, given the geographical situation of Manitoba. Raw materials often have to be hauled over much longer distances than would apply, for example, in Eastern Canada. Outbound shipments in many industrial groups are predominantly to Western Canada and the northern United States: otherwise, the problem of very high transport costs would be even more severe on outbound shipments. Where Manitoba products are exported over long distances, for example in the pulp and paper industry, outbound transport costs become substantial.

Considering the various industrial groups in Manitoba, three stand out with very heavy transport costs. These are non-metallic minerals, where the main output is cement and cement products; chemicals and allied products, where fertilizer is an important output; and animal feed, where the subsidized freight rates of the Western Grain Transportation Act do not apply on purely domestic movements and traffic to the U.S. Heavy transport costs in relation to these industries are not surprising.

The next highest groups for transport costs appear to be furniture and fixtures and plastic products. Both groups bring raw materials in over considerable distances and, although markets tend to be local in Western Canada, outputs are bulky and of low density, implying relatively high transport costs.

Three industrial groups have total transport costs averaging some 7% of product value. The paper and allied products group is very diverse and the heavy costs on the outbound movement represent primarily shipments of paper over long distances to United States markets; the other component of this group, corrugated cardboard containers, has very modest transport costs. Fabricated metals often have problems of bulkiness and low density in the outbound shipments. Transport costs for "other" food are relatively high because the inbound component includes an allowance to farmers for the transport of oilseeds used in the production of vegetable oils and meal.

Meat and poultry products have transport costs averaging 6% of product value. Outbound costs are increased by the need for refrigerated equipment and the lengthy distances many shipments travel to Eastern Canadian markets. No other industrial group in Manitoba has a transport cost component in excess of 5% of product value and special comment is therefore not offered in this section, although each group is reviewed later in the chapter.

8.2 MANUFACTURING PRODUCTION - FOOD AND BEVERAGES

As shown in Table 8.1, shipments of food and beverages by Manitoba firms amounted to $1,738 million in 1988, accounting for 28% of total provincial manufacturing shipments. The food sector is discussed below under five sub-groups and the beverages sector under two sub-groups. The latest published data on shipments for these sub-groups relate to 1986, but this is not a major problem in the present context where the intention is only to give a rough indication of the size of each sub-group. Rather surprisingly in view of inflation over the last two years, the sub-group figures for 1986 add up to more than the preliminary totals for 1988, but Manitoba has lost a major meat packer in this period.

8.2.1 Meat and Poultry Products

There are two major meat processing plants, together with a number of smaller facilities, located in Winnipeg, a major beef processor in Brandon, and a hog processing facility in Neepawa. There are also several plants processing poultry products, of which the largest are located in Blumenort and Winnipeg. Three processors were interviewed - Burns Meats Ltd. in Winnipeg, Springhill Farms in Neepawa and Granny's Poultry Co-operative Ltd. in Blumenort.

Burns Meats Ltd. is a fully integrated facility, dealing with all stages of processing, from slaughter of hogs and cattle to packaging of the finished product. It is the main distribution centre for fresh and processed product from Vancouver to the Maritimes, with secondary distribution points in Calgary, Brampton and Vancouver. Having closed the aging plants in Calgary and Kitchener, Burns is committed to Winnipeg because of its central location, which gives good access to the Canadian and U.S. markets. (Although Winnipeg has lost two major meat packing facilities - Canada Packers recently and Swift's some time ago - both these companies were operating outdated facilities.)

The availability of live animals locally and the collection efforts of the Manitoba Hog Producers' Marketing Board keep inbound costs relatively low. Virtually all inbound movements are by truck.

Competition with local meat packers in distant markets makes Burns sensitive to freight costs, but quality of service factors far outweigh costs in relative importance. The finished product is very susceptible to deterioration and must spend as little time as possible in transit. Monitoring devices are used to measure fluctuations in temperature which can speed the deterioration process. To alleviate some of these quality of service problems, Burns employs a fleet of company owned trucks, which handle virtually all the shipments within Winnipeg and about 50% of the intraprovincial shipments.

For-hire carriers involved in intraprovincial movements of processed meat sometimes provide poor service. The shipments not handled by private carrier are often subjected to less than adequate refrigeration. The problem with the availability of refrigerated units is compounded with the danger of contamination from mixing loads.

The long-haul carriers involved in moving meat and meat products inter-provincially are perceived to be competitive and innovative, with a high standard of service. Intermodal shipments offer some savings in freight costs, but delays can cause problems with a product prone to deterioration. Although there are some rail movements of refrigerated products to Eastern Canada, the major mode for outbound shipments will remain as truck transport.

The interview with Springhill Farms in Neepawa took place before the media coverage of the financial problems facing this facility. In late January, 1990, the company entered into an agreement with a Quebec firm, Olympia Meats Ltd., to sell hog carcasses for processing in Quebec. This means that the Springhill plant will no longer be preparing fresh chilled product for market and employment will fall by about half to approximately 100. However, Springhill hopes that eventually its venture with Olympic will result in the reopening of the cutting operations at Neepawa.

In its slaughtering activities, Springhill Farms benefits from the proximity of available hogs, but there are relatively high outbound costs to move product to Quebec. There is no rail service to the plant. However, by making a commitment to volume and regularity of service, good motor carrier freight rates have been negotiated in the past. Springhill Farms has generally been satisfied with the quality of service offered by truck transport and believes that this has improved over the last two years.

Granny's Poultry Co-operative Ltd. in Blumenort, Manitoba was established in the 1950s and, although the head office is now in Winnipeg, the eviscerating plant is still in

Blumenort. Employing about 250 in total, Granny's gathers Manitoba produced chickens, fowl and turkeys and processes them for the fresh and frozen markets. The plant is well located in terms of sourcing the live birds and distributing the processed product. The live birds are priced f.o.b. the farm and transported to the plant almost entirely by company owned trucks.

In addition to the large Winnipeg market, major markets for the finished product are Montreal, Toronto, Calgary and Edmonton, together with considerable exports to Japan. The major mode for interprovincial shipments is for-hire truck transport and quality of service is good. Intermodal service to Eastern Canada, which is used strictly for frozen product, provides some cost savings but generally involves longer delivery times.

Private carriage is used for shipments to Winnipeg; for-hire carriers then transport the product to rural Manitoba points. The processor is disappointed with the lack of refrigerated trucks for intraprovincial shipments. Fresh poultry products are extremely time and temperature-sensitive and some rural markets, e.g. the Interlake region and Northern Manitoba, are not accessible as long as carriers with operating authority do not provide reefer service. The management believes that the service provided by intraprovincial carriers has deteriorated over the last five to ten years.

Inbound transport costs are equivalent to 3% of product value and outbound transport costs to 5% of product value; these figures are slightly higher than for beef and pork. Transport requirements in the coming decade are bound to change as customers demand more fresh poultry products. Poultry processors encourage this trend because it cuts down the inventory requirements associated with frozen products, but they point out the need for intraprovincial carriers to respond to these changes.

8.2.2 Fruit and Vegetable Products

Three companies were interviewed - the two large potato processing plants, Carnation Foods Co. Ltd. in Carberry and McCain Foods Ltd. in Portage la Prairie, and the Campbell Soup Company in Portage la Prairie.

Carnation employs approximately 400 people in the production of frozen french fries, instant mashed potatoes for the retail market and potato granules for the restaurant trade. The operation is vertically integrated to include a company owned potato farm which supplies some of the raw materials. However, the majority of the potatoes are supplied by local Manitoba farmers. Following harvest, the growers store the potatoes and deliver them f.o.b. the plant as the processor requires them. Carnation bears no transport costs for inbound shipments.

Although Carnation has a railway siding it has not used rail for outbound shipments in over twelve years. For-hire truck transport moves virtually all processed product to destinations across Canada; the McDonald and Wendy restaurant chains are Carnation's major customers. There is some difficulty in obtaining refrigerated trucks during peak periods such as summer and Christmas.

McCain Foods Ltd. has its head office located in Florenceville, New Brunswick and employs 250 at the Portage la Prairie plant, primarily in processing and distributing potato products. The markets are in Western Canada, the United States and the Orient. The main product is frozen french fries, but the plant also produces instant mashed potatoes and dehydrated sliced potatoes. The ten year old plant is well located in terms of access to raw materials, generally available within a one hundred mile radius, and to the large Western Canadian market for the finished products.

McCain products from the New Brunswick facilities and fruit juices produced in Toronto also move through the Portage la Prairie facility for re-distribution. These shipments move primarily by refrigerated rail car and, on the average, take seven days to arrive. The rail service is deemed to be reasonably good and because these shipments are not extremely time-sensitive, the cost savings justify its use.

Potatoes for processing are generally delivered by farmers f.o.b. the plant and there is a provision for compensation to farmers travelling beyond a certain radius. Inbound costs expressed as a percentage of product selling price are less than one percent.

The major mode for outbound shipments is for-hire truck transport, but McCain owns four tractor-trailer units that deliver to Saskatchewan, North Western Ontario and parts of Manitoba. Although the product is not particularly susceptible to damage, it must travel in a temperature controlled environment. With a few exceptions, the for-hire truck transport service is held in high regard, both for quality of service and the rates negotiated by the traffic department in Florenceville. Outbound transport costs represent 1 to 2% of the product selling price.

A large portion of the outbound shipments is in containers trucked to Vancouver, Seattle and Portland and destined for the Orient. This represents a substantial and growing market for McCain products and the firm is concerned with occasional problems in obtaining containers for overseas shipments.

McCain expects on recent trends to increase volumes and this will put further demands on transport systems in terms of keeping freight costs down and maintaining levels of service. The management also recognizes their comparative disadvantage in competing with the U.S. processors for overseas markets based on McCain's distance to West Coast ports.

The interview with the Campbell Soup Company Ltd. located in Portage la Prairie took place before the company had announced plans for a plant closure at the end of 1990. The reasons given for the choice of the Portage la Prairie location over thirty years ago were a good source of raw materials, a good labour supply and ready access to both major railways and to the Trans Canada Highway.

Over the years, outbound freight to the western provinces had been primarily by rail with most inbound shipments by truck. More recently, there has been a marked swing to trucks for outbound shipments, as customers are reducing inventories and depending on just-in-time delivery of goods. The railways have been able to pick up some of this business with their intermodal units, but trucks provide the most timely service. Trucking has become more efficient with larger units and contract commitments on rates. Stretch wrapping and moving product on pallets speeds up loading and unloading times as well as improving the quality of delivered goods.

Campbell also has two local mushroom farms providing fresh produce to Winnipeg, Thunder Bay, Regina and Saskatoon. Company owned trucks are used for making warehouse and direct store deliveries of mushrooms.

8.2.3 Dairy Products

The interview with the Milk Producers' Marketing Board was reported earlier in Chapter 7 and Beatrice Foods Inc. was interviewed in respect of distribution of local and manufactured dairy products in the province.

Beatrice Foods Inc. is a Canadian owned dairy and food processor, with the majority of its plants located in Eastern Canada. The Manitoba division consists of the cultured food products plant in Brandon, which has recently experienced major renovation, and the Winnipeg plant, which processes and packages fluid milk and ice cream. Including the numerous company owned and staffed distribution centres throughout the province, Beatrice's employment figure in Manitoba is approximately 200. In addition, there are some independent franchise distributors. Many of the distribution centres are former small dairy processing plants that were acquired by the firm over the years.

Inbound shipments consist of raw milk, delivered by the milk producers f.o.b. the plant, and finished products coming from the other processing plants: Beatrice Old Fashioned ice cream from Simcoe, Ontario, coffee creamers from Oshawa, premium yogurt from Montreal, and cultured products such as yogurt, cottage cheese and sour cream from Brandon. Finished product from outside the province represents only about 5% of the total distributed by Beatrice in Manitoba and the major mode for these inbound shipments is for-hire truck transport. These costs represent 4% of the product selling price, a figure that is roughly the same as the inbound transport costs for raw milk in relation to product volume.

The major mode for outbound shipments to the various distribution centres is for-hire truck transport and this includes the 22 company owned trailers which are hauled by contract tractor service. Local deliveries from the distribution centres are handled by some 70 company owned and staffed trucks. Quality of service factors are obviously important when moving dairy products and it is crucial that the refrigerated products spend the minimal amount of time in transit. Outbound transport costs represent on the average 5% of the product selling price.

Intermodal service is used for time-insensitive shipments of packaging materials such as plastic pails from Vancouver and paper containers from Toronto. Previous attempts at shipping finished product by intermodal rail service failed because the constant jarring movement resulted in product damage due to load shifting.

Beatrice plans call for greater production in the Brandon plant, which will mean reduced shipments from Montreal and a saving in transport costs. Increased shipments from Brandon to Eastern Canada will lead to a more balanced exchange of finished product between west and east and cut transport costs. Efforts will also be made to reduce transport costs by a combination of effective negotiating with common carriers and further use of company owned vehicles.

8.2.4 Animal Feed

Two companies were interviewed in the animal feed business, Feed Rite Ltd. of Winnipeg, which also has smaller subsidiaries elsewhere in the province, and Wheat City Seeds Ltd. of Brandon.

Feed Rite Ltd. in Winnipeg is the largest manufacturer of animal feeds and supplements in Manitoba and employs some 125 persons. It also has smaller plants located in Brandon, Manitou and Arborg. The large Winnipeg plant is well located in terms of receiving inbound shipments of grain from Manitoba farmers, meat meal and blood meal from Burns, and soya meal from the U.S. Originally, farmers bringing livestock to the stockyards in St. Boniface found it convenient to pick up animal feeds for the return trip. The stockyards have since shut down, but major markets for animal feed in the prairies are still readily accessible from the present location.

The majority of components used to manufacture animal feeds are sourced in Manitoba and move by a combination of for-hire truck transport and company owned trucks. The remaining inbound shipments originate in the U.S. and move almost exclusively by for-hire truck transport. The industry is sensitive to inbound freight costs as they range from 5% to 10% of the product selling price.

Outbound shipments are primarily destined for Western Canada and only 20% of the product stays in Manitoba. Although there are some rail and intermodal shipments of bagged and bulk animal feed to Thunder Bay and British Columbia, the major mode for outbound shipments is for-hire truck transport. Outbound transport costs represent about 10% of the product selling price and despite this sensitivity to freight costs, the manufacturer is generally satisfied with the levels of service offered by the common carriers. Nevertheless, Feed Rite sees a need for larger trucking units to cut down freight costs, since grains and animal feeds are relatively low in value and therefore sensitive to freight costs.

Wheat City Seeds Ltd. of Brandon is involved primarily with sourcing, cleaning and bagging forage seed, which is obtained mainly from the Dauphin-Swan River area and shipped to agricultural customers in Canada and the U.S. The company also buys non-board grains and ships producer cars to Thunder Bay and Vancouver. A plant in Laurier, Manitoba, processes, cleans and bags seed, most of which is destined for U.S. destinations. Inbound materials are priced f.o.b. the plant and generally move by farm truck. Some large shipments are by for-hire truck transport.

In respect of products not moving under low WGTA rates, outbound costs in relation to product selling price can vary between 7% for rapeseed shipped to the mid-U.S. to 18% for wheat shipped to Saskatchewan. Cereals are more freight sensitive than oilseeds because of lower selling prices. The major mode for transporting non-WGTA seed to Manitoba, Saskatchewan, Ontario and U.S. markets is for-hire truck service. The processor is generally pleased with the service.

Movements of eligible grain to Thunder Bay and Vancouver are, of course, entirely by rail under the WGTA rates. Peas and lentils usually move under the WGTA rates by containerized piggyback service. There have been problems in obtaining producer cars in the past and there appears to be no easy solution. The rail service in regards to spotting and picking up the producer cars is good, but getting the cars to the terminal within two weeks can be a problem. Tracing lost shipments is often difficult. However, turnaround time for rail shipments is acceptable.

The Free Trade Agreement would have no impact on forage seed and oats, which are exempt from tariffs, but the market for wheat and flax could be expanded since the tariffs are 21 and 22 cents per bushel, respectively. The processor does not feel that U.S. product would penetrate the Canadian market to any extent.

8.2.5 Other Food

Production in the statistical category "other food" is substantial with 1986 Manitoba shipments valued at $419 million. By definition, this is a miscellaneous category and the views of shippers are illustrated by two specific examples - vegetable oils and sugar.

In the vegetable oil industry, CSP Foods Ltd. is owned jointly by the Saskatchewan Wheat Pool and Manitoba Pool Elevators. The marketing and head office is in Winnipeg. Total employment in Manitoba fluctuates between 300 and 350 with canola crushing plants located in Altona and Harrowby. CSP Foods also owns a crushing facility at Nipawin, Saskatchewan. Refining and further processing of the product is carried out at Altona and Nipawin and the Altona plant also crushes sunflowerseed. Total annual crushing capacity is approximately 600,000 tonnes; ignoring the small loss in crushing, the yield from canola is roughly 40% canola oil and 60% canola meal.

The manufacturer has located the crushing plants close to the source of raw materials because of sensitivity to freight rates. The newest plant, which was built in 1983, is located at Harrowby in north west Manitoba and in prime canola growing territory. Inbound traffic moves mainly by for-hire truck transport, but there is some use of farmer-owned trucks. Competition among motor carriers has resulted in favourable freight rates and service. The Altona plant also has several company owned tanker and hopper trucks.

Outbound shipments of oil within Canada and the U.S. are almost exclusively by rail tank car. Minimum compensatory rates administered by the National Transportation Agency have enabled the manufacturer to compete in Eastern Canada. Offshore shipments, which constitute 25% of the total production, move by tank car under the WGTA rates to the ocean vessels docked at Vancouver and bound for India, Indonesia and Pacific Rim countries. The processor uses truck transport to accommodate some customers in Minnesota and the Dakotas.

CSP Foods Ltd. considers itself captive to CP Rail, particularly in the case of the Harrowby plant which was built in anticipation of daily service. This has since deteriorated to the point where it takes ten days to ship product to Vancouver compared to the five days it takes to ship product from Altona to the West Coast. The manufacturer's reliability as a shipper has been seriously eroded because of reduced levels of rail service. Although confidential rates and competitive line rates have helped, the railroads must provide a higher level of service. There is also a critical shortage of storage facilities for canola meal once it reaches the port in Vancouver.

The Manitoba Sugar Company, which is a division of B.C. Sugar Refining Company Ltd., produces sugar and the by-products of molasses and beet pulp from the sugarbeets which are grown in Southern Manitoba. There are about 100 permanent employees and, during the processing period from mid-September until mid-January, total employment increases to almost 250. At harvest, beets are delivered to strategically located piling grounds and later reloaded and hauled to the factory by a commercial motor carrier. The factory is well located for receiving the sugarbeets and for distribution of the finished products.

The main market for the sugar produced at the Winnipeg factory is within Manitoba, but some of the sugar is also sold in Saskatchewan. The sugar is marketed in three forms: bagged, bulk and liquid. Although the granulated white sugar in bags is susceptible to punctures and scuffing, claims have been minimized by blocking, palletizing and shrink wrapping the loads. The service provided by for-hire truck, which is the major mode for transporting the finished produce, is exceptionally good in terms of delivery and dependability. Some large users provide their own trucks to pick up the product.

Beet molasses are sold in Western Canada and shipped either by rail tank car or by for-hire tank truck. Beet pulp is sold across Canada and is shipped either in bags or bulk. Both rail and for-hire trucks are used in the movement of this product. Both modes receive good grades for dependability and frequency of service. Inbound and outbound transport costs each account for some 2% of product value.

8.2.6 Soft Drinks

The manufacture of soft drinks is centred in Winnipeg and an interview was carried out with Beverage Services Ltd., which bottles brand name products such as Coke and Sprite. The company produces carbonated drinks under licence, it has recently become involved in the production of plastic bottles and it operates vending and dispensing machines.

Outbound movements of products are almost entirely by truck transport with 85% of this moving in company owned vehicles. These company vehicles service the Manitoba market and for-hire trucks are used mainly for plastic bottles to be moved to out-of-province destinations. Bus service is very good for next day delivery of small shipments that are too large for couriers. There are some intermodal shipments of resins from Korea. Beverage Services Ltd. is setting up a rail siding to accommodate bulk transport of some raw materials. Customs delays at the U.S. border can create problems for inbound shipments of machinery and equipment.

8.2.7 Alcoholic Beverages

This industry in Manitoba consists of beer production, together with one distillery and one winery. With two major breweries, Winnipeg is the manufacturing and distribution centre for beer in Manitoba. Malting barley, the main ingredient in the brewing process, is available locally. Corn and filtering materials, which constitute approximately 35% of input requirements, move by rail from the United States. Some packaging materials are shipped from eastern Canada. Shipments of finished product to north-western Ontario, which represent about one-quarter of total Manitoba production, are the only significant extraprovincial movements of beer. However, if interprovincial and U.S./Canada barriers to trade were removed, the industry would face a major rationalization with significant implications for the transportation industry.

Associated Beer Distributors (ABD) is owned jointly by the breweries and is a central warehouse for outbound shipments. ABD collects the finished product from the individual manufacturers and delivers exclusively in Winnipeg, while out-of-city shipments move by common carrier. There are now very few movements of beer by rail. In response to what they considered unfair truck freight rates, ABD applied in 1987 for operating authority outside Winnipeg, believing that beer was subsidizing other goods being shipped to rural points in Manitoba. More favourable commodity rates have since been negotiated and common carriers continue to be used. The finished product is susceptible to breakage and must travel in a temperature controlled environment, but the manufacturers seem satisfied with the quality of service presently provided.

Despite the overall market decline for distilled spirits, the Seagram's plant in Gimli maintains its viability. It is the company's only major distillery west of Toronto and produces about 65% of the company's Canadian output. This is predominantly in the form of fully matured whisky in bulk, ready for bottling in the east. About 75% of the company's total sales are exported, with the U.S. the major destination. Current employment is approximately 85.

The plant has good access to raw materials, most of which are available within Manitoba and move by for-hire truck transport. Production inputs are delivered f.o.b. the plant, but transport costs are perceived to be relatively low. When Seagram opened the plant in 1968, an agreement was struck with CP Rail to keep the branch line open. Since then, some 90-95% of the finished product has moved by rail tank car and, through the efforts of a central traffic department which negotiates freight rates and leases tank cars, the feasibility of the Manitoba operation has been maintained.

The finished product is not particularly susceptible to damage other than contamination or spillage and is not sensitive to temperature extremes. Dependability and speed of delivery are important to maintain a "never short-ship" policy and to meet just-in-time inventory at the bottling plants. Movements are centrally monitored and CP Rail can usually accommodate extra shipments on short notice. Rail service has improved over the years in that there are fewer delays and special attention is given to bulk movements. Transport requirements are likely to increase with the implementation of the Free Trade Agreement.

Andres Wines Ltd, which produces wine in casks for the consumer market, employs four local Morris residents on a part-time basis and is the only winery in Manitoba. It is one of six company plants located across Canada; the head office is in Winona, Ontario. The bottling facility, which was shut down three years ago, has recently been overhauled and volume could increase 50-60% should bottling resume. On the average, the plant operates three weeks out of the month.

For-hire truck transport is the major mode for inbound and outbound shipments. The bulk product is shipped via tanker truck from Calgary, processed and readied for market in casks. It is cheaper to ship bulk product long distances than to ship casks for the consumer market and the casks are also more susceptible to damage. The finished product is shipped by local carrier to the Manitoba Liquor Control Commission warehouse located in Fort Garry, spending less than an hour in transit. The service provided by truck transport is judged to be satisfactory, but the manufacturer does feel captive to the local carrier with the operating authority.

8.3 MANUFACTURING PRODUCTION - PLASTICS, CLOTHING AND FOREST PRODUCTS

This section covers six industrial groups - plastics, clothing, wood products, furniture and fixtures, paper and allied products, and printing and publishing. It was shown in Table 8.1 that Manitoba factory shipments from these six industrial groups amounted to $1,635 million in 1988, accounting for 26% of total industrial shipments from Manitoba. The three largest industrial groups are, in order, printing and publishing, clothing and paper and allied products. The other three groups are considerably smaller.

8.3.1 Plastic Products

The central location of Manitoba gives good access to Canadian and U.S. markets for flexible and rigid plastics. This was indicated both by the Reliance plant in Winnipeg, which produces mainly bulky plastic containers, and the Tupperware plant in Morden.

Plastic products are bulky and lightweight. Cubing or transport pricing on volume can make the finished product very sensitive to freight costs, but the manufacturers can often negotiate rates based on actual weights rather than volume. Reliance uses private and for-hire trucking for shipments within the province. On interprovincial shipments, for-hire trucking and intermodal rail service are used. Tupperware has only one local carrier to move trailers to and from Winnipeg, where interlining takes place, but the local carrier was highly regarded.

By making a commitment to volume and frequency of shipments, the plastic manufacturers have negotiated favourable freight rates. Dependability of deliveries is important and the carriers generally provide reliable service for the firms surveyed. The manufacturers would like to see an increase in the size of trailers to accommodate the bulky, lightweight finished product.

Most of the resins used by the Winnipeg and Morden plants move by rail hopper car. The manufacturers feel that there could be improvements in the quality of service the railways provide, especially in terms of availability of larger cars and shipment tracing. It is believed that rail transport has not been as responsive to the needs of shippers as truck transport.

8.3.2 Clothing

The Manitoba clothing industry, including leather and textile products, consists of almost 150 establishments, with 8,000 employees and annual sales of $400 million. The industry is overwhelmingly Winnipeg based.

Neither raw materials nor markets for the finished product are nearby. Fabric is shipped from Eastern Canada, but approximately 60% of the raw materials are purchased outside Canada, mostly in Korea and Taiwan. Finished product sold in Manitoba represents 7-10% of total production, with the bulk of shipments out of province. However, in spite of the large distances involved in both assembly of raw material and distribution to markets, transport is not a major cost item to the clothing industry. Inbound transport costs represent no more than 1% of the product selling price and outbound transport costs 1.5% of product selling price. Both inboard and outbound shipments move mainly by for-hire truck.

In 1984, the Manitoba Fashion Institute asked Thorne, Stevenson & Kellogg to "conduct a study to define the most effective approach for inbound and outbound movements, and to estimate individual and total costs and benefits". By consolidating the shipments of the member firms, it was believed that freight costs could be lowered substantially. Lower density shipments of clothing shipped in a hanging position could be combined with higher density bulk shipments. Negotiating as a consortium could result in more favourable freight rates and the study showed substantial benefits from consolidation. However, in the meantime, some of the larger firms had already negotiated better rates, there was little interest in forming a consortium to reduce freight costs, and nothing came of the proposal.

Westcott Fashions Ltd. of Winnipeg, which employed 470 workers, was also interviewed in respect of transport costs. However, on October 30, 1988 this manufacturer announced that it would close in March 1989 "for economic reasons" unrelated to transport. This duly took place and the interview with Westcott is therefore not reported in this study.

In the leather industry, Dominion Tanners was interviewed. This company is by far the largest processor of animal hides in Manitoba, with an employment figure of 230. The Winnipeg plant was built on the present site in 1965 and subsequently expanded, while the firm has two other plants in Edmonton and Toronto. The largest market for processed leather products is in Eastern Canada, but Dominion Tanners is well located in terms of sources of raw hides.

Approximately 75% of the raw hides are purchased in the U.S. mid-west and the major mode is for-hire truck transport. The balance of the raw hides are from Western Canada, particularly Alberta. Piggyback service, which tends to be slower and less reliable than truck transport, is used for most of the shipments from Edmonton in order to reduce transport costs. Special paints used in processing animal hides travel by temperature controlled for-hire truck transport from Eastern Canada in the winter months. During periods when there is no danger of freezing, company owned trucks that deliver finished product to Eastern Canada carry the paints as a backhaul. Inbound transport costs represent 1% of the product selling price.

The major mode for shipments of finished product, 90% of which move to Eastern Canada, is private carriage. The use of company owned and staffed trucks guarantees the quality of service. In addition, the costly burden of less-than-truckload is avoided by coordinating partial loads destined for the various destinations. The outbound transport costs associated with this high value cargo represent about 0.5% of the product selling price. Dominion Tanners' transport requirements in the next decade are not expected to change drastically.

8.3.3 Wood Products

The Manitoba wood products industry consists of some 85 establishments with sales valued at $211 million in 1988. Most of these establishments are privately owned and the industry includes sawmills and manufacturers of finished products such as doors, windows and kitchen cabinets. Three firms were interviewed - Repap Manitoba Ltd. at The Pas, Loewen Windows at Steinbach, and Spruce Products Ltd. at Atikameg Lake and Swan River. As paper is more important than lumber in the product mix from Repap, this company is reported later under paper and allied products.

Loewen Windows in Steinbach, which provides employment for over 500 Manitobans, manufactures windows and doors for the building construction industry. The company was established in 1905 and has expanded since the early 1960s, including the most recent phase in 1989. This success cannot be attributed to any one factor, but Steinbach is regarded as a good central location.

The plant is not close to the source of raw materials and all the lumber is moved from the West Coast. However, the cost of bringing in these materials represents only 1.5% of the product selling price. Management feels that rail service is incapable of supporting the just-in-time inventory methods currently used and therefore virtually all inbound shipments are by for-hire truck. Moreover, Steinbach is not served directly by a railway.

Private carriage is responsible for 95% of the outbound shipments. In response to what the company considered inadequate levels of service provided by some contract carriers, a fleet of tractor-trailers was purchased. Quality of service factors that are so important when transporting a fragile and time-sensitive product were further ensured by assigning company-trained drivers to operate these rigs. The remaining shipments that move by for-hire LTL must meet the high company standards already established by the private fleet. Market growth in Eastern Canada and the U.S. will increase transport requirements, not only in actual volumes moved, but in the levels of service demanded by customers.

Spruce Products Ltd., one of the province's largest processors of forestry products, has two sawmill-planing operations in Manitoba. The employment figures for the Atikameg Lake and Swan River operations are 20 and 50, respectively. The mills are well located in terms of sourcing logs for processing and the average length of haul is between 35 and 45 miles. Most of the logs are delivered f.o.b. the mill and it is therefore difficult to determine inbound transport costs as a percentage of product selling price.

For-hire truck transport is the major mode for moving the finished product. Except for direct sales to customers in the vicinity of the mills, which represent approximately 5% of total production, the final product is usually sold to brokers in Winnipeg. The management at Spruce Products is pleased with the quality of service provided by for-hire truck transport and has negotiated favourable backhaul rates. Outbound transport costs represent between 5 and 6% of the product selling price.

8.3.4 Furniture and Fixtures

The position that Winnipeg held, perhaps fifteen years ago, as the furniture manufacturing centre of Western Canada, has diminished because operations have since shifted to more strategically located areas. Manitoba's resource base does not yield most of the necessary raw materials for furniture; steel must be imported from eastern Canada and fabric from the southern United States. Manufacturers must also pay high outbound transport costs because they are dependent upon sales in distant markets, primarily Alberta and British Columbia. Approximately 80% of all finished goods are shipped out-of-province.

One of the primary functions of Furniture West, the trade association for Manitoba furniture manufacturers, is to negotiate competitive freight rates on behalf of its membership. Rates are based on the collective volume that can be committed to a particular carrier over a specified period of time. The association employs a full-time traffic manager to coordinate this function. Inbound traffic moves by truck and by rail pool cars. Outbound traffic employs for-hire trucks and there are also some rail movements. The susceptibility of furniture to damage in transit places an emphasis on claims handling as a criterion for carrier selection.

Furniture West considers that Winnipeg manufacturers are at a disadvantage with respect to the inventory carrying costs. If a manufacturer is near its supply source, inbound shipments and production schedules can be coordinated to minimize inventory levels. Manitoba manufacturers must maintain a safety stock because of their distance from suppliers. Although competitive and providing adequate service for the Manitoba furniture manufacturers, Furniture West felt that the transport industry could be more responsive to new technology and to providing enhanced information services to customers.

The complete elimination of customs tariffs, scheduled for 1993 by the Free Trade Agreement, will increase competition and place an even greater importance on transport costs. Liberalized trade may create opportunities for furniture manufacturers that would result in a shift to a north-south trading pattern. To succeed in this new environment, prospective exporters must identify and develop their target markets. Furniture West sees a need for industry and government to work together on a long term marketing strategy.

8.3.5 Paper and Allied Products

Although there are only 24 establishments in the Manitoba paper and allied products industry, factory sales were a substantial $308 million in 1988. The primary sector, producing pulp, newspaper and building board, is dominated by Abitibi-Price and Repap Manitoba and interviews with these two companies are summarized below. The secondary industry consists of the production of corrugated boxes, paper bags, cardboard cartons, envelopes and stationery. Three companies employ more than 100 persons - Domtar Packaging, MacMillan Bathurst and Reed - and the interview with MacMillan Bathurst is recorded below.

Abitibi-Price has one its most efficient newspaper mills located in Pine Falls, Manitoba, where raw materials are available locally. Outbound shipments are approximately 30% to Western Canadian customers in Manitoba, Saskatchewan and Alberta. The other 70% of shipments are to United States customers in the central, southern and mid-west states. Outbound transport costs range from 9 to 16% of product value depending on final destination and mode of transport. Roughly 65% of the movement is by rail, with the balance by truck.

The level of service provided by CN Rail over the last few years has declined in terms of frequency and dependability. The condition of rail cars appears to have deteriorated and there is a shortage of top quality newsprint rail cars. Due to competitive priority, the use of piggyback service is increasing even though additional costs have to be incurred in loading to reduce in-transit damage. The use of truck and piggyback service is certain to increase to meet customer demand for just-in-time delivery.

An interview took place in late 1988 with Manfor Ltd., the crown corporation which was the predecessor company to Repap Manitoba Ltd. In early 1989, Repap took over the facility at The Pas, with its sawmill-planing mills and the production of unbleached pulp and paper. A further interview was not requested of Repap, but data collected in late 1988 has been updated from media reports. Current employment consists of 100 people in the woodlands division, 150 in the sawmill and 400 in the pulp mill, for a total of 650. There are also contractors who work for the woodlands division but are not company employees.

The woodlands division, which included nine contractor operations in late 1988, supplies logs for the lumber and pulp and paper operations. Contractors involved in trucking logs to the plants indicated in separate UMTI interviews that they felt disadvantaged by highway weight restrictions. The average length of haul was 150 kilometres and increasing every year; it was claimed that considerable expenditures on roads would be required to make the trucking operations more viable. Since the interview, the Province has made a commitment to upgrade roads in this area.

The sawmill produces dimensional lumber, marketed in Manitoba and the U.S.. In the pulp and paper division, unbleached kraft paper accounted for 87% of the output, with the remaining production consisting of unbleached pulp. The U.S. is the major market, with important shipments to Eastern Canada. There are plans to convert from an unbleached to a bleached kraft operation, but this is still awaiting environmental clearance as of January, 1990.

Inbound transportation to the Repap plant is 80% by truck and 20% by rail. Outbound transport is overwhelmingly by rail, but truck is used when low backhaul rates are available. There was a general satisfaction with CN Rail, but fears were expressed as to the future in respect of pressure on the carrier's overall revenues and the possible substitution of short line rail carriers.

MacMillan Bathurst Inc. in Winnipeg, which custom manufactures corrugated cardboard containers almost entirely for the Manitoba market, employs approximately 150 production and office workers.

Inbound shipments of paper products originate in Eastern Canada. These raw materials, coming from Sturgeon Falls and Red Rock, Ontario, and Bathurst, New Brunswick, travel exclusively by rail to minimize freight costs. The manufacturer has a CP Rail siding and the service is held in high regard. However, there are problems with receiving the shipments arriving by CN Rail to be interswitched with CP Rail. In addition, the large rolls of paper can be damaged in transit. Piggyback service is judged to be slow and the cost savings not adequate to justify its use. To ensure quality of service and dependability, a fleet of company owned trucks move over 80% of the finished product. The large Winnipeg market is serviced entirely by private carriage and the rural Manitoba market is served by a combination of for-hire and private truck transport.

Inbound transport costs average about 1.5% of product value and outbound transport costs less than 1%. Transport requirements are not likely to change in the near future because the market for corrugated paper products has been relatively stable for over a decade. The Free Trade Agreement is not expected to have a significant effect on MacMillan Bathurst's markets. There will probably be a shift away from rail transport as truck transport continues to be more price competitive and efficient.

8.3.6 Printing and Publishing

The printing and publishing industry in Manitoba is concentrated in Winnipeg, although there are also important firms in rural Manitoba, for example D.W. Friesen at Altona. The Canadian Printing Industry Association (Manitoba Chapter) represents approximately 20% of the establishments in terms of numbers but 40% in terms of total sales. An account of an interview with this Association is given below.

Raw materials used by the printing and publishing industry move mainly by rail from Eastern and Western Canada and there is significant use of intermodal transport. Outbound shipments move by truck to major eastern and western centres as well as the large Chicago market. Access to the large markets in Vancouver and Toronto is aided by Winnipeg's central location. Freight costs can be minimized by using rail transport for inbound shipments. The finished product, which is susceptible to damage and is time sensitive, moves by truck to avoid delays encountered with rail shipments. Some of the larger firms have their own trucks for local deliveries but most of the traffic moves in for-hire trucks. Shippers tend to stay with a dependable carrier unless offered substantial freight savings by a competing firm.

Truck transport provides good service for interprovincial movements but there are problems with international shipments. Time delays are often experienced at terminals, e.g., Minneapolis. Intermodal services could be used more, but there is not sufficient confidence in rail movements. Air freight transport to Europe and the Caribbean Islands is rated as very good and as having shown considerable improvement over the last decade.

In addition to the interview with the Canadian Printing Industry Association, a visit was made to D.W. Friesen and Sons Ltd., a family owned printing business established in Altona in the early 1900s. This firm employs 300 people in Manitoba, together with sales staff at offices throughout Western Canada and in Toronto. Printed materials, mostly destined for the eastern market, comprise 60% of the firm's operations and the balance is the wholesaling of stationery supplies bound for Western Canada.

The majority of inbound shipments, especially paper products, originate in Eastern Canada and are moved less-than-truckload (LTL) to Friesen's Winnipeg warehouse. Approximately 10% of the raw materials move from the U.S. by truckload. Movements between Altona and Winnipeg are made by a fleet of company owned trucks. This ensures the quality of service that is so important with a time-sensitive product. Printed materials are not particularly susceptible to damage and outbound shipments to Eastern Canada and the U.S. generally move LTL out of Winnipeg. Stationery products, mainly destined for markets in Western Canada, move by intermodal service because they are not as time-sensitive as printed materials. Inbound and outbound transport costs each average 2.5% of product price.

8.4 MANUFACTURING PRODUCTION - METALS, MACHINERY AND CHEMICALS

Comments are offered in this section on six industrial groups - primary metals, fabricated metals, machinery, electrical and electronic products, non-metallic minerals and chemicals and products. Primary metals relates only to the steel production of Manitoba Rolling Mills, as the refining of nickel, zinc and copper was covered in the mining section of Chapter 7. Excluding primary metals, the other five groups in this section had shipments valued at $1,380 million in 1988, accounting for 22% of Manitoba's factory shipments.

(Manufacturing shipments covered in sections 8.2 to 8.4 amount to 76% of the total manufacturing shipments recorded in 1988. Primary metals account for a further 10%, but these shipments were mainly addressed under mining. Transport equipment also accounted for 10%, but this industry is covered in Chapter 6. The remaining 4% of factory shipments are from other industries, which are too diverse to allow summary comment.)

8.4.1 **Primary Metals**

The Manitoba Rolling Mills, which produces steel in Selkirk, is the only manufacturer reviewed in this industrial group. Major markets for the finished product are in Eastern Canada and the United States, while much of the inbound shipments of scrap iron also originate in Eastern Canada. Despite the locational disadvantages, the manufacturer has developed a market for specialty products; special in terms of shape, size and amount.

Although sensitive to freight costs, 90% of the inbound shipments move by truck transport to accommodate just-in-time inventory methods. There was a feeling that regulation had fostered higher rates, but increased competition had appeared since the 1987 deregulation of transport. Inbound transport costs amount to some 4% of product selling price. The quality of service has remained consistently good.

Rail is much more important in outbound shipments, accounting for 52% of the movement. CP Rail has anticipated and met the needs of the manufacturer. Dependability is reinforced by electronic monitoring of shipments and claims processing does not appear to be a problem. Although 20% of total shipments are intermodal, the use of the service is declining as costs approach that of truck transport. Outbound transport costs average 4% of product selling value.

Future requirements by Manitoba Rolling Mills will place a demand for new technologies in transport equipment, such as more efficient trailer configurations. Sophisticated scheduling systems to accommodate just-in-time inventory and the increased demands of customers will place a high priority on the need for innovative ideas.

8.4.2 Fabricated Metals

In 1988, manufacturing shipments in this group amounted to $390 million. Three establishments were visited - Dominion Bridge in Winnipeg, Behlen Industries Ltd. in Brandon and Inventronics Ltd. in Brandon.

Dominion Bridge, with approximately 440 employees, manufactures structural steel for highway and railway bridges, structural steel joists and transmission towers. The company started in Montreal and eventually built plants in Winnipeg, Regina, Calgary and Vancouver as it followed railroad expansion in the late 1800s. The Winnipeg plant is the only one in Western Canada that has remained open following the recession of the early 1980s.

The majority of the raw materials are purchased from plants in Hamilton and Sault Ste. Marie and the major transport mode is rail. CP Rail is used most by Dominion Bridge and is judged to be somewhat better than CN Rail, but response and reaction time is still less than adequate. More and more, shipments are scheduled by the hour and the railways cannot offer that kind of dependability. However, the manufacturer believes that the railways will eventually be able to deliver the type of service that is demanded by customers. Inbound transport costs amount to 2% of product selling price.

Nearly 85% of outbound shipments are destined for Western Canada and move mainly by for-hire truck transport. Shipments to off-shore markets, which represent 5% of total production, move by rail to Montreal and are then loaded aboard ocean vessels destined for South America and Africa. Truck service is considered to have shown moderate improvement over the last 10-15 years and is judged to be competitive in terms of freight rates. There can be reluctance to use the services of new entrants who cannot provide the levels of service required in peak times. Although the finished product is not especially susceptible to damage, costly coatings applied to prevent deterioration can be damaged. The manufacturer was disappointed that, despite the recent regulatory changes, there was still a problem with certain carriers obtaining operating authority in Manitoba. For interprovincial movements, it was considered that there was still some inconsistency in regulations that apply to weights and dimensional loads.

Dominion Bridge is poised to expand and develop new markets. Increased sales would result in added transport requirements and communications between shippers and carriers could be fine-tuned with new computer technology. The manufacturer recognizes that freight costs could be decreased if shippers were willing to make a commitment in terms of volume and frequency of shipments.

Behlen Industries Ltd., which was established in 1969 as a U.S. subsidiary, experienced major expansion during the 1970s. Although the main product was originally steel bins for agricultural use, the firm diversified its product line to include commercial buildings and culverts for road construction. Behlen has a competitive advantage in marketing culverts for the local market because the product is bulky, lightweight and of low value. Employment, which at one point reached around 300, has dropped off to approximately 100 as a result of the downturn in the agricultural economy. Faced with closure in 1982, the management group negotiated ownership of the firm in 1984.

Rolls of sheet metal, which represent the majority of the raw materials, are sourced in Hamilton and move in covered gondola rail cars. For-hire truck transport is used in emergency situations and for bringing in sealers and paints. Operating under confidential contracts, Behlen is reasonably satisfied with rail rates which have been negotiated. Rail service is judged to be relatively good except for the occasional shortage of flatbed cars and the actual time involved in rail shipments.

Western Canada represents the largest market for the finished product, but Behlen also has a dealer network that covers most of Canada and some Northern States. Prices are quoted f.o.b. the plant; 20% of the commercial products and 40% of the agricultural building products are picked up by the dealers who use private carriage. There are occasional containerized loads that move by rail to Montreal, where they are loaded aboard ocean vessels for export. Shipments to Canada and the United States, when not picked up by dealers, move by for-hire truck. Inbound freight costs represent roughly 3 to 4% of product selling price. Outbound freight costs are roughly half this range, but these are paid by the dealers and not by Behlen.

Inventronics Ltd., whose head office is in Brandon, employs 85 in the production of sheet metal enclosures and hardware used by the telecommunications and utility industries. Nine-tenths of the Brandon production goes to the United States, mainly to Minneapolis, with the balance shipped within Western Canada. This close association with the U.S. market place has improved expertise and made new technology available to the manufacturer. Sister plants located in Edmonton and in Moose Jaw, Saskatchewan manufacture product for Alberta Telephone, Saskatchewan Telephone and Saskatchewan Power. The main plant is located in Brandon because the company was originally founded by a local resident.

Sheet metal is purchased from Toronto and Winnipeg and moves entirely by truck transport. The raw material is purchased from the mill and is then cut and levelled at service centres prior to arrival at the plant; it can be priced f.o.b. the plant or the mill. Inbound freight costs approximate to 3% of product value, but these costs are often included in the purchase price of materials rather than separately specified. Response time provided by truck transport is sometimes a problem in accommodating just-in-time inventory methods.

Outbound shipments, which are priced f.o.b. the plant, move entirely by for-hire truck transport. The high valued finished product is not freight sensitive and outbound transport costs amount to some 3% of product price.

8.4.3 Machinery

The Manitoba machinery industry had factory shipments of $279 million in 1988. Agricultural implements made up more than 75% of the sector and visits were made to Versatile, Farm King Allied Inc. and Cereal Implements Ltd. Outside the agricultural implements industry, a visit was made to Toro Canada in Steinbach, Manitoba. This interview is not reported, as the company has now ceased operations in Manitoba. Approximately, 95% of the components used in the manufacture of Toro products at Steinbach were trucked in from the U.S. and half the outbound products were shipped to Europe. Understandably, the heavy burden of transport costs was a substantial reason for the closure of this company.

Versatile Farm Equipment Company, a subsidiary of Ford-New Holland, employs approximately 800 in the manufacture of farm tractors and harvesting equipment. Although the company was originally founded in Toronto in 1948, Versatile began manufacturing four-wheel drive tractors in 1961 on the present site. At that time, Winnipeg was an excellent location for servicing the western market of the Prairie Provinces, North Dakota, South Dakota and Montana. Since then, however, Versatile has become a world class manufacturer of agricultural equipment, specifically four-wheel drive tractors, and the location is no longer so advantageous. Inbound transport costs average some 2.5% of product value and outbound transport costs a further 2%.

The majority of inbound shipments originate in the U.S. and move entirely by for-hire truck transport. To accommodate truckload shipments which are more reliable and cost effective, collection points for inbound materials have been established at certain terminals. Speed of delivery and dependability are critical. For a period between the mid-1970s until 1986, Versatile operated a company-owned fleet of tractor-trailers in response to the undependable service offered by some contract carriers. Although truck transport is now perceived to be competitive and of relatively good quality, the manufacturer feels that the response to the recent deregulation has been slow and disappointing.

Versatile ships finished product world-wide but the majority of the product is destined for the U.S. market. By using a limited number of specialized highway carriers on a for-hire basis, Versatile has minimized damage in moving finished product. On the rare occasion that damage has occurred, the manufacturer has had little difficulty in negotiating a fair settlement.

Rail service has been used to some extent recently but it is believed that the railways will have to be more competitive and innovative or they will lose traffic to truck transport. Versatile is of the opinion that rail service has shown no improvement over the last decade. Transport requirements are bound to change in the next few years with further use of just-in-time inventory methods and the increased demands due to deregulation and the Free Trade Agreement.

Farm King Allied Inc. manufactures agricultural equipment, including front end loaders and bale elevators. Employment figures for the two Manitoba plants at Winnipeg and Morden are 85 and 60, respectively. Both plants benefit from the central location in terms of access to raw materials and the markets for the finished products.

Four company owned tractor-trailers handle most of the transport requirements. Warehouses in Regina and Toronto facilitate the coordination of inbound and outbound shipments to minimize empty trailer movements. The quality of service that is guaranteed by maintaining a private fleet of trucks compensates for the extra cost involved. The drivers are very conscientious in their treatment of the equipment and the load and they strive to project a positive company image.

For-hire truck transport is used very little, but the service provided at peak times is relatively good. The company assesses private versus for-hire transport on an ongoing basis. The manufacturer feels that the LTL loads tend to be subjected to rough handling at the terminals which can result in damage claims. Intermodal service, which is used occasionally, tends to be a very good in terms of dependability.

To maintain a competitive position in the market, Farm King Allied Inc. uses sophisticated monitoring equipment for the purpose of shipment tracing and coordinating all inbound and outbound movements. This constant communication between the two plants, the distribution centres and the truck drivers results in a high level of efficiency. The manufacturer is looking to expanding markets in the U.S. and Canada and this will increase future transport requirements.

Cereal Implements Ltd., with its dealer network in Western Canada and the U.S. mid-west, and Co-op Implements Ltd. with its retail stores in Western Canada, are the distributing companies for Vicon, which manufactures swathers, pull-type combines, cultivators, chisel ploughs, sprayers and air seeders. These three separate, yet integrated, companies - Cereal Implements, Co-op Implements and Vicon - are owned by the Greenland Group in Holland and share a building in Portage la Prairie. The combined employment figure for Manitoba, including the numerous parts depots in the province, is well over 300 people.

In addition to distributing Vicon's Portage la Prairie product line, both Cereal Implements and Co-op Implements are the distributors for haying equipment from Holland and finished product from Vicon's other manufacturing plants in Nobleford, Alberta and Cambridge, Ontario. They are also the exclusive distributors for Claas combines, Roper lawn and garden equipment and Deutz tractors. The management feels that the Portage la Prairie location is central for serving the entire North American market.

The major mode for inbound shipments is for-hire truck transport, with most of these shipments originating in Canada. Imports from Holland move aboard ocean vessels in large containers and then by rail and some small equipment travels in air containers. Cereal receives some 40 ocean containers from Holland per year and the service is well regarded given that it takes on the average 21 days for the container to arrive from Holland. Inbound transport costs represent about 1% of the product selling price for North American product equipment.

For-hire truck transport is the major mode for outbound shipments, 75% of which are destined for Western Canada. Outbound transportation is focused on carriers that are dependable, flexible and fast. Special packaging and loading procedures have cut down the damage which could otherwise be substantial. A large proportion of parts shipped, especially in urgent cases, moves by air freight. Rail transport is hardly ever used. Overall, outbound costs represent about 2% of the product selling price.

Cereal Implements Ltd. expects that their transport requirements will increase dramatically in the next few years, given the volume increases they have experienced recently. To accommodate this rapid expansion, for-hire carriers will have to maintain and, in some cases, improve the services offered.

8.4.4 Electrical and Electronic Products

Interviews took place with Northern Telecom on telecommunications equipment and Federal Pioneer on electrical transformers and switchgear.

The seven year old Northern Telecom plant in Winnipeg is one of many built across Canada in a move to decentralize operations formerly located in Eastern Canada. In Manitoba a total of 450 employees are involved in the manufacture and distribution of digital transmission equipment used by telephone companies.

Three-fifths of the inbound shipments originate in the U.S. and the major mode is air transport. For-hire truck transport is used for some of the heavier and bulkier materials. The balance of the raw materials are sourced in Eastern Canada and the major mode is for-hire truck transport. Inbound transport costs represent about 1.5% of the product selling price.

Since 90% of the outbound shipments are less than full load and often require expedited service, for-hire truck transport and air transport are the major modes. The central traffic department in Toronto has negotiated rates that make it cheaper to ship parcels weighing up to 80 pounds by air than by truck. Susceptibility to damage factors such as vibration and jarring are also minimized by using air ride trailers and air freight. Outbound transport costs represent between 3 and 4% of the product selling price.

Federal Pioneer Ltd. was established in 1947 at the time of the Manitoba Government's decision to implement rural electrification. The firm employs 450 people in the manufacture and distribution of transformers and switchgear used to transmit and control electric power. The finished product, which can weigh between 20 tons and 700 tons, is shipped to utility companies all over North America and overseas. Provided that they can remain competitive in these markets, the firm is committed to doing business in Manitoba.

Although most of the raw materials are sourced in the Hamilton and Toronto markets, inbound transport costs represent less than 1% of the product selling price. The for-hire truck transport used to move these raw materials is considered to be good and the manufacturer has negotiated favourable freight rates. It is believed that rates have decreased with the recent deregulation.

Due to the very nature of the finished product, which is extremely heavy and of high density, outbound costs average 4% of product selling price. Federal Pioneer Ltd. is captive to the railways because these shipments are primarily by specialized rail car and require special treatment; the manufacturer has worked with the railways on a training program designed to teach the rail crews how to handle the product. Rail service has shown moderate improvement in the last 10-15 years, especially in terms of customer service and shipment tracing. The account managers are generally professional, well trained and knowledgeable. The equipment, however, is deteriorating and there appears to be no move to replace the aging rolling stock.

In addition to the cyclical nature of Federal Pioneer's business, the firm's transport requirements will change as a result of environmental concerns. To date, these concerns have resulted in the elimination of numerous small electrical substations, which are being replaced with fewer, larger substations. The larger stations require larger transport equipment to haul the associated equipment, thus increasing the demands on the transportation system.

8.4.5 Non-metallic Minerals

This industrial group covers mainly the manufacture of cement, ready-mix concrete and concrete products. Quarry products were reviewed under mining in Chapter 7. Interviews were carried out with Inland Cement Ltd. and Barkman Concrete Ltd.

Inland Cement Ltd., with an employment figure of about 80, is centrally located to serve the Manitoba market. Most of the raw materials required to manufacture cement are available locally. Limestone, which constitutes 70% of the total production inputs, is quarried at Steep Rock, 280 kilometres from Winnipeg. Bottom drop rail cars of limestone are received daily and the manufacturer is pleased with the service that CN Rail provides. Sand is trucked in from Beausejour, iron by-products come from the Manitoba Rolling Mills in Selkirk, and clay is quarried on the plant property.

Rail is used for shipments of cement to the Limestone Project and to the company's distribution centre in Thunder Bay, but truck transport is the major mode for outbound shipments. The manufacturer considers truck transport as a competitive and dependable service on the basis of formal monitoring of quality of service factors.

Inbound transport costs represent 10% of product selling price and outbound transport costs rather more than 10%. Disregarding the normal fluctuations of the construction cycle, Inland Cement Ltd. expects little change in transportation requirements over the next decade.

Barkman Concrete Ltd. in Steinbach employs approximately 100 people in the manufacture and distribution of the following products: driveway blocks, steps, septic tanks and pre-fabricated floors for barns. Saskatchewan and Alberta represent a big market for these products; in particular, Barkman floors have been installed in about 80% of the barns built in the last 15 to 20 years. Bulk cement comes from Winnipeg and steel from Calgary and Winnipeg, with other raw materials available locally.

The cost of inbound shipments, which move mainly by for-hire truck transport, represents some 10% of product selling price. By comparison, freight costs associated with outbound movements can vary from 15% to as much as 50% of the product selling price. The product is also susceptible to damage, especially during loading and unloading. To minimize the damage factor, Barkman Concrete operates a fleet of company owned trucks, which are driven by conscientious and properly trained drivers. Deliveries must also coincide with construction schedules and delays are not tolerated by customers. The company would also like to see greater standardization of truck weight and dimensional regulations.

8.3.6 Chemicals and Products

Shipments of $214 million in 1988 consisted mainly of agricultural chemicals and also included shipments from the paint industry. Interviews were carried out with the Simplot Canada Limited. of Brandon and with Phillips Paint Products (1968) Ltd. of Winnipeg.

The Simplot Canada Limited. has 223 employees in the production and distribution of nitrogen fertilizers. Nitrogen solution, ammonium phosphate, ammonium thiosulphate and anhydrous ammonia are liquid forms produced by Simplot. Solid forms include urea, ammonium nitrate and mono-ammonium phosphate. Raw materials are not sourced locally and finished product must travel considerable distances; inbound and outbound transport costs can amount to 20-25% of product value.

Natural gas, which moves by pipeline, represents the largest movement of input in terms of dollar value. The major mode for inbound surface transportation is rail which moves phosphoric acid from Pocatello, Idaho and points in North Carolina or Florida, and molten sulphur from Alberta locations. The firm has a CN siding and interswitching with CP is relatively trouble-free. However, the actual frequency of service, which is down to two trains per week, causes back-ups during peak season. The management believe that confidential contracts have created an element of ignorance of freight rates among shippers. Mono-ammonium phosphate, which is produced outside the province and then resold, moves by for-hire truck transport.

Outbound shipments, 90% of which move by for-hire truck, are extremely costly and represent an unusually high percentage of the product selling price. Approximately 85% of the shipments move within 350 to 400 miles and there is no backhaul available due to the nature of the product. The service provided is considered to be very good in terms of competitive rates and the equipment and drivers used to move the finished product.

Phillips Paint Products (1968) Ltd. of Winnipeg employs 30-35 in the manufacture of paint products for the industrial sector. The present facility in the St. Boniface Industrial Park is only seven years old, but the firm was established fifty-five years ago by a Winnipeg family. The firm faces relatively high transport costs for inbound materials from Eastern Canada, but markets for the finished product are concentrated in Western Canada and are readily accessible.

As much as 80% of inbound shipments of raw materials originate in Eastern Canada, specifically Toronto and Montreal, and the major movement is by railway pool cars. By forming an association with Furniture West Inc., Phillips Paint Products has had favourable freight rates negotiated on their behalf. This would not otherwise have been possible, because the paint manufacturer does not ship sufficiently large volumes to be able to negotiate such rates for less-than-carload shipments. Inbound transport costs represent about 5% of the product selling price.

Although there are some shipments to Thunder Bay and the U.S., 95% of the finished product is shipped to manufacturing firms in Western Canada, with for-hire truck transport as the major mode. The finished product is priced f.o.b. the plant, but outbound transport costs represent approximately 5% of the product selling price. The company does not anticipate any substantial changes in their transport requirements over the next decade.

8.5 SUMMARY

The final section of this chapter summarizes the material collected from interviews with Manitoba manufacturing industries in respect of their use of transport services. The interview process has produced a mass of data, but this has been necessary to give an understanding of the methods of transport and concerns across the spectrum of manufacturing in the province. This volume of material is not easy to summarize, but some broad conclusions are outlined. Prospects and concerns are postponed until the last section of Chapter 9.

1. Manufacturing accounted for 61% of the total value added by the goods producing industries of Manitoba in 1988. This underlines the importance of the manufacturing sector to the economic base of the province.

2. The ratio of transport costs to product price is a useful means of identifying transport sensitive industries, although some of the limitations of this measure have been identified. Three groups stand out with very heavy transport costs. These are non-metallic minerals, where the main output is cement and cement products; chemicals and allied products, where fertilizer is an important output; and feed grains, which are low value products and often not eligible to use the subsidized freight rates of the Western Grain Transportation Act (WGTA). Heavy transport costs for these industries are not surprising.

3. The next highest groups for transport costs in Manitoba are furniture and fixtures and plastics, with transport costs equivalent to 9-10% of product value. Both groups bring raw materials over considerable distances and outbound shipments are bulky, incurring relatively high transport costs. Three industrial groups have total transport costs averaging some 7% of product value - paper and allied products, vegetable oils and meal, and fabricated metals. For the first two groups, the main problem is distance to markets, but for fabricated metals the heavy cost is primarily due to bulkiness in the outbound shipments.

4. Meat and poultry products have transport costs averaging 6% of product value. The problem is again distant markets on outbound shipments, together with the need for refrigerated equipment. No other industrial group in Manitoba has a transport costs component in excess of 5% of product value. However, it would be superficial to conclude that the remaining industrial groups are not faced with particularly high transport

costs. A low ratio of transport costs to product value may mean that transport is not a major cost item. It can also mean that heavy transport costs to distant markets have prevented an industry's expansion and left it limited to nearby markets where transport costs are less of a burden.

5. The chapter contained reports on interviews with fifteen firms producing in the food and beverages sectors. Only one firm mentioned use of the air mode and this was only for emergency shipments. Use of surface transportation is summarized in the following table. For ease of interpretation, the table shows, for example, that all 15 firms used for-hire trucking in outbound transportation; that 10 of these firms used for-hire trucking as their main outbound mode; and that therefore the remaining 5 firms used for-hire trucking to supplement their main mode, which was private transport in 2 cases and rail in the other 3 cases.

	For-hire Truck	Own Truck	Rail
Modes used			
Inbound	10	2	5
Outbound	15	8	8
Primary mode			
Inbound	5	-	1
Outbound	10	2	3

For-hire trucks were used by ten companies for inbound deliveries but, in several cases, these were supplementary to producer deliveries or used to transport other less important raw materials. The use of trucks owned by processors was not widespread and was mainly to supplement deliveries made by agricultural producers. Inbound movements by rail related primarily to secondary inputs used in the production process. It will be noted that only six of the fifteen companies identified for-hire truck or rail as their primary mode for inbound deliveries; the other nine companies relied on deliveries by producers as their primary mode for inbound transportation.

In outbound transportation, the truck was predominant. For-hire truck transport was used by all fifteen firms interviewed and ten of these used for-hire trucking as the main mode for outbound shipments. Utilization of company-owned trucks for outbound shipments was quite common, particularly for deliveries in Winnipeg and short-distance movements within the province. Two companies used private carriage as the major mode for outbound shipments.

Rail transport was the most important outbound mode for three companies. The financial inducement of low WGTA freight rates was the attraction for canola products. The other two companies using rail as the main outbound mode were Campbell Soup and Seagram. Other users of rail were either shipping some product under the WGTA rates or merely using rail for a very small proportion of their shipments.

There were few specific complaints in respect of transportation by processors of food and beverages. The quality of rail service was criticized by two of the three shippers who relied mainly on this mode for outbound shipments. Processors of meat and poultry were concerned about the adequacy of refrigerated capacity in intraprovincial trucking, but there were no criticisms of the interprovincial industry on this score. McCain felt that its export activities through Vancouver could be inhibited by an inadequate provision of containers for overseas shipments. This problem is already under review by the Manitoba Department of Industry, Trade and Tourism. However, on balance, shippers in the food and beverages sectors seemed reasonably satisfied with their transportation.

6. There were twelve interviews with firms and company associations in the six industrial groups of **plastics, clothing, wood products, furniture and fixtures, paper and allied products, and printing and publishing**. Only one respondent, the Canadian Printing

Industry Association, mentioned the use of air freight and this was for shipment of urgent orders to overseas destinations. The use of surface transportation is summarized in the following table.

	For-hire Truck	Own Truck	Rail
Modes used			
Inbound	7	1	8
Outbound	12	6	3
Primary mode			
Inbound	6	1	4
Outbound	7	3	2

One firm in the wood products industry did not mention inbound transport, as logs were delivered f.o.b. to the sawmills. Six of the seven firms using for-hire trucking indicated that this was their most important inbound mode, with the seventh relying mainly on producer deliveries and its own transport. Of the firms using rail for inbound shipments, four indicated that this was their major mode -two plastics companies, the manufacturer of corrugated cardboard containers and the trade association for the printing and publishing industry. The other users of rail service tended to ship supplementary inputs by rail, but some of these shipments were quite considerable.

The truck was predominant in outbound transportation. For-hire truck transport was used by all twelve firms and was the main form of transport by seven of these firms, including one company which used its own transport to interline with commercial carriers in Winnipeg. Private transport, where companies used their own trucks, was common. Of the six firms using private transport, three relied on this as the main transport mode for outbound shipments. Only three firms indicated use of rail in outbound shipments, but this included the two large paper producers where rail was the primary mode.

In respect of complaints, rail quality of service was criticized by three companies; two used rail as their main mode for inbound transport and one used rail as the main mode for outbound transport. One respondent complained about delays in truck transport at the international border, but the company made it clear that the complaint was addressed to the institutional arrangements and not to the trucking company. Apart from one respondent who was critical of the marketing approach of transport carriers, there seemed to be general satisfaction with the transportation provided to these industrial groups.

7. Thirteen firms were interviewed in the industrial groups of **primary metals, fabricated metals, machinery, electrical and electronic products, non-metallic minerals, and chemicals and products**. One firm in the electrical and electronic group stated that air freight was the main mode for inbound transport and shared first place with for-hire trucking in outbound shipments. Other firms, mainly in the farm machinery sector, indicated some use of air freight, both for high value components needed urgently in the production process and for parts required by customers. One customer in the fertilizer industry indicated that the major input to the production process was natural gas transported by pipeline. Use of the surface modes by the thirteen firms is shown in the following table.

	For-hire Truck	Own Truck	Rail
Modes used			
Inbound	12	1	7
Outbound	13	3	9
Primary mode			
Inbound	6	1	4
Outbound	9	2	2

For-hire trucking was used for inbound shipments by all but one of the companies interviewed. For six firms, for-hire trucking was the primary transport mode. One company relied on its own transport for inbound shipments. Rail was the main inbound transport mode for four companies - two were purchasing steel products from Eastern Canada, one was moving limestone 280 kilometres to Winnipeg and one was shipping raw materials for paint in pool cars. As already indicated, the other two firms used air freight and gas pipeline, respectively, as their primarily inbound transportation mode.

In outbound transportation, all the companies used for-hire trucks. For nine of these companies, for-hire trucks represented the main outbound transport mode, including one company which used for-hire trucking and air freight to roughly the same extent. Only three companies used their own trucks for outbound freight, but two of these relied almost entirely on private carriage, using commercial trucking only in emergency situations. Two companies regarded rail as their primary mode - Manitoba Rolling Mills and Federal Pioneer. Of the other rail users, three used rail exclusively on exports sent to Montreal for subsequent forwarding by ocean vessel, while the other four rail users did not utilize this mode extensively.

There was no long list of complaints in respect of transport. Three firms commented on the need for improvement in rail service, mainly in respect of frequency and quality of equipment. Three firms complained about slow government action on standardizing truck weights and dimensions across Canada. One company expressed dissatisfaction with the slowness of the effects of truck deregulation, but two other firms noted that lower rates had been achieved.

8. The last table consolidates the three tables given in paragraphs 5 to 7 above and covers a total of 40 interviews. A primary transport mode for inbound shipments is shown for 28 companies; the balance of 12 companies is explained mainly by producer deliveries to food processors and manufacturers of forest products. For outbound shipments, a primary mode is shown for all 40 companies.

	For-hire Truck	Own Truck	Rail
Modes used			
Inbound	29	4	20
Outbound	40	17	20
Primary mode			
Inbound	17	2	9
Outbound	26	7	7

The table demonstrates the dominance of for-hire truck transportation. All companies used commercial trucking in outbound shipments and three-quarters of the firms used commercial trucking for inbound shipments. Private trucking was not used much for inbound transport; however, transport provided by agricultural producers and loggers, which is excluded from the table above, is usually by private carriage. Almost half the firms interviewed used their own trucks in outbound shipments and this was the most important transport mode for seven of the firms. Rail transport was used by almost half of the firms interviewed and was the most important mode for roughly one-fifth of respondents.

CHAPTER 9: THE USERS OF TRANSPORT SERVICES - OTHER ISSUES

The two previous chapters have examined the primary industries and the manufacturing industries of Manitoba in respect of their use of transport services. Chapter 9 addresses a number of other issues and the various sections of this chapter are somewhat independent of each other rather than closely linked. The chapter starts with a review of a shipper survey carried out in early 1987 by a consultant under contract to TIDAC. The second section of the chapter looks at the rail freight rate structure in Manitoba. Section 3 relates to rural concerns, based on interviews with Regional Development Corporations. Section 4 summarizes meetings with public interest groups on passenger transport. The chapter closes with a summary and this is followed by a statement of prospects and concerns which covers the three Chapters 7 to 9.

9.1 SHIPPER SURVEY ON ATTITUDES TOWARDS TRANSPORT SERVICES

This section reviews a postal survey of shippers carried out under a contract from TIDAC by R.L. Banks and Associates Inc. and J.S. Merrett and Associates. The survey was undertaken in the early months of 1987 and the data relate to this time period. The target population of the survey was 600 firms in Manitoba using transport services, of which roughly three-quarters were in the manufacturing sector and the balance predominantly in wholesale and retail distribution. Survey forms were distributed to 400 firms and 172 valid responses were received. In a survey of this type, there is always a problem of lack of randomness, in that the firms themselves decide whether or not to complete a questionnaire. Questions are also more open to misunderstanding in a postal survey than in face-to-face interviews. Nevertheless, the survey results are consistent with the findings of the UMTI interviewing process reported in Chapters 7 and 8.

The tables in this section are all taken from the Banks and Merrett survey. Table 9.1 shows the frequency of receiving and shipping, together with the origins of inbound shipments and the destinations of outbound shipments.

Table 9.1: Shipping Patterns

	% distribution	
	Inbound	Outbound
Frequency of receiving and shipping		
Daily	65	86
Weekly	16	8
Less than weekly	19	6
	100	100
Origins and destinations of shipments		
Manitoba	37	45
Elsewhere in Canada	45	42
Out of Canada	18	13
	100	100

Source: R.L. Banks and Associates Inc. and J.S. Merrett and Associates: Shipper Survey, prepared for TIDAC, August 1987, Tables 6 and 7.

Firms covered in the survey made outbound shipments more frequently than they received inbound shipments. Over five-sixths of the sample made outbound shipments on a daily basis, while only two-thirds received inbound shipments on that frequency. Inbound shipments tended to travel longer distances than outbound shipments. For example, 63% of the inputs originated outside Manitoba, while 55% of the outputs were consigned beyond the province.

Table 9.2 shows the availability and use of transport services.

Table 9.2: Availability and Use of Transport Services

	% of respondents with service	
	Available	Used
Private trucking		
Own trucks	94	52
Suppliers/customers	95	60
Commercial trucking		
Full load	99	74
Partial load	98	82
Rail		
Carload	94	39
Other	90	20
Air cargo/express	92	62
Other		
Freight forwarder	91	34
Postal service	98	83
Courier	98	90
Bus	98	71

Source: Table 9 from source cited in Table 9.1.

The vast majority of respondents had the option of using any of the transport services available in Manitoba. Of the major transport modes, commercial trucking was used by the greatest number of respondents. Utilization was allegedly heavier in respect of the postal service and couriers, but this may have included some communication by letter, as distinct from shipment of product. The bus was used to convey freight by a large number of respondents. Private trucking was also an important transport mode.

Air cargo or air express was used by three-fifths of respondents, at least on an occasional basis. Rail transport was less popular, with approximately two-fifths of respondents using carload rail traffic. Other rail traffic - calculated as an average of utilization of piggyback trailers, containers and pool cars - was used only by one-fifth of respondents. Freight forwarders were utilized by one-third of respondents.

Table 9.3 shows the number of commercial trucking firms available to the respondents in the survey. Urban areas are defined as Winnipeg and Brandon, with the rest of Manitoba treated as rural. Relatively few urban shippers are limited to a small number of trucking companies, but lack of choice is more common in the rural areas.

Table 9.3: Number of Commercial Trucking Firms Available

	% distribution		
	1-5	6-10	over 10
Full load			
Urban	28	29	43
Rural	68	23	9
Total	34	29	37
Partial load			
Urban	17	32	51
Rural	80	15	5
Total	25	30	45

Source: Table 10 from source cited in Table 9.1

Table 9.4 shows the ranking of transport modes by order of importance in respect of outbound and inbound shipments, where a rating in #1 position indicates the most important mode, #2 the second most important, and so on.

Table 9.4: Ranking of Importance of Transport Modes

	Inbound	Outbound
Commercial trucking - partial load	2	1
- full load	1	2
Private trucking - own truck	5	3
Postal service	6	4
Private trucking - supplier/customer trucks	3	5
Courier	7	6
Bus	-	7
Rail - carload	4	8

Source: Table 12 from source cited in Table 9.1. Modes rated below #8 in outbound list are omitted. (The bus mode was only #10 for inbound transport and is not therefore shown in the table.)

Commercial trucking and private trucking are the most important transport modes used by survey respondents. The full load commercial truck is more important on the inbound movement and the partial load on the outbound movement. With private trucking, respondents are more likely to use their own trucks on the outbound movement than on the inbound movement. The postal service ranked surprisingly high on both movements, but there must be some doubt as to whether this relates exclusively to freight as distinct from letter communication. Rail was more important for the inbound movement than the outbound.

Table 9.5 relates to the level of satisfaction with transport modes expressed by users of each service. Users were asked to rate each transport characteristic on a four-point scale of very satisfied, satisfied, dissatisfied and very dissatisfied. The results were then reported in terms of the percentage of users who were very satisfied or satisfied in respect of each transport characteristic.

Table 9.5: Satisfaction with Transport Modes

% of respondents very satisfied or satisfied

	Service Levels	Rates	Respons-iveness	Loss and Damage	Compet-ition
Private trucking					
Own trucks	98	n/a	97	97	n/a
Suppliers/ customers	98	n/a	94	93	n/a
Commercial trucking					
Full load	96	82	93	89	85
Partial load	90	65	85	86	75
Rail					
Carload	79	76	74	91	65
Other	83	83	79	82	72
Air cargo/ express	92	71	88	92	77
Other					
Freight forwarder	79	75	81	93	84
Postal service	46	51	47	66	39
Courier	93	83	90	90	92
Bus	96	98	92	95	84
Average	86	76	84	89	75

Source: Table 13 from source cited in Table 9.1.

Before commencing discussion of this table, two points should be noted. Firstly, only users of a transport mode were asked to rate the mode in terms of satisfaction. If this question had been asked of non-users, it would have been impossible to have interpreted responses, as these would have reflected adverse previous experience on the part of some non-users and lack of knowledge on the part of others. However, excluding non-users means that the sample size is low in some cases, especially other rail services. Secondly, postal service performed the worst of all transport modes in terms of user satisfaction. As mentioned earlier, respondents may have been expressing dissatisfaction with the post office as a means of communication rather than as a method of freight transport.

Service levels related to such aspects as transit time and variety of equipment available. Satisfaction ratings in the table were high for trucking, the bus, courier services and air transport. In terms of transit time, rail would inevitably be rated less favourably than the other modes. However, in absolute terms, the level of satisfaction was quite high for all modes, except the postal service.

The question on rates is self-explanatory and this was not applicable to private trucking. The overall average level of satisfaction on rates was less than for service levels. Air cargo/express is inevitably expensive and received a below average response. The other areas of dissatisfaction were postal service and less-than-truckload traffic.

Responsiveness was defined as speed in providing equipment, on-time delivery and reaction to problems and complaints. This characteristic is correlated with service levels described earlier and the pattern of response was similar.

Dealing with loss and damage claims was regarded as satisfactory in all modes except the postal service.

The question on competition related to the availability of an alternative carrier to provide the same type of service. Satisfaction levels averaged lower here than on most of the other transport characteristics.

Table 9.6 shows future expectations on the transport modes.

Table 9.6: Future Expectations on Transport Modes

% distribution of responses

	Truck	Rail	Air
More competitive	50	16	40
Less competitive	17	31	21
The same	33	53	39
Total	100	100	100
Better service	28	10	24
Poorer service	15	22	16
The same	57	68	60
Total	100	100	100

Source: Table 15 from source cited in Table 9.1

Respondents expected trucking to become more competitive and this was also so, to a lesser extent, for air. It is rather surprising that rail was expected to become less competitive, as the survey was undertaken at a time when the new National Transportation Act was before the House of Commons with its stress on making the railways more competitive through the use of confidential rates, competitive line rates and extended interswitching limits.

In terms of quality of service, more respondents expected an improvement rather than a deterioration in service in truck and air transport, but the response on rail was more pessimistic. However, on all modes, the majority of respondents anticipated no change.

A further question on expectations relating to rates has not been shown in the table. In all modes, higher rates were expected, but this response seemed to reflect respondent appreciation that the economy was still subject to general price inflation rather than views on where transport charges were going vis-a-vis the prices of other goods and services.

To sum up, the shipper survey confirms the importance of highway transport to manufacturing industry in Manitoba. Availability of transport is not a problem. A postal survey of this type tends to overestimate the importance of minor modes - postal service, courier and bus - which are used frequently, but not for substantial shipments.

On quality of service, shippers seemed very satisfied with private trucking, commercial full-load trucking, courier service and the bus. Air service fared well except in respect of rates and the satisfaction rating on LTL trucking was also below average on this count. Although the railway received a below average rating on three of the five transport characteristics, this partly reflected the technological constraints on rail transport rather than the quality with which the service was being provided. Respondents were not satisfied with the post office, but this may have related more to letter service than to freight transport.

In respect of future expectations, respondents were optimistic on the truck and air modes expecting more competition and better service. The expectations on rail were more pessimistic.

9.2 THE RAILWAY FREIGHT RATE STRUCTURE IN MANITOBA

Freight rate disparities were a frequent complaint in Western Canada, virtually from the first construction of the railways. As recently as July, 1973, the Western Economic Opportunities Conference took place in Calgary, Alberta. This was a meeting between the Prime Minister of Canada and the Premiers of the four Western Provinces. Transport had pride of place on the agenda and the Premiers claimed in their position statement that:

> The lack of competition in certain regions of the West places railways in a position of significant monopoly, leading to rail rates and pricing policies which are a major barrier to economic development and diversification. (Paper jointly submitted by the Premiers of the four Western Provinces at Calgary, July 1973, p.1)

However, from interviews conducted with transport users in Chapters 7 and 8, from the survey of shippers summarized in section 9.1 and from a relative lack of current media attention, this problem now appears to be much less acute. The railway has long lost its monopoly of freight transport in Western Canada. In manufacturing industry, the truck is the predominant transport mode. It was shown in Chapter 7 that even the mining industry is not completely captive to rail. For grain traffic, rail rates are fixed by the National Transportation Agency on a distance related basis.

Table 9.7 shows railway tonnage carried by major commodity groups in 1985, the latest year for which published data are available. The table relates to all domestic carload revenue traffic moving in Canada. The major exclusions from these statistics are Canada-United States traffic, freight moving over the lines of two or more railways, container and piggyback movements, joint water and rail movements, and less than carload traffic.

For Canada as a whole, over half the domestic tonnage carried on the railways consists of products of mines. The second largest commodity group is grain moving under rates established under the Western Grain Transportation Act (WGTA) at 20% of total tonnage. This is followed closely by manufacturing and miscellaneous products at 18% of total tonnage. Forest products provide 9% of traffic. Agricultural products, excluding WGTA grain, consisted mainly of non-statutory grain movements, potatoes and vegetables; they provided only a modest 2% of railway tonnage. Animals consisted of livestock and meat, but contributed only a very small share of total railway traffic.

Table 9.7: Domestic Railway Tonnage Carried by Major Commodity Groups - 1985

	Canada	From Manitoba	To Manitoba
Thousands tons	136,113	8,310	4,026
% distribution			
WGTA Grain	20.1	72.0	10.4
Agriculture	2.1	1.2	5.4
Animal	0.2	0.6	0.1
Mine	50.6	10.9	32.0
Forest	9.0	3.6	12.3
Manufacturing and Miscellaneous	18.0	11.7	39.8
Total	100.0	100.0	100.0

Source: Canadian Transport Commission, Traffic and Tariffs Branch, Reference Paper No. 11, Commodity Flow Analysis 1985, (Ottawa; Queens Printer 1987) Tables 1-10. (Tons are 2,000 lbs and not metric tonnes in this data source.)

In terms of tonnage, the railways load twice as much in Manitoba as they unload here. The explanation is entirely grain shipments, which dominate the traffic moved from Manitoba. In almost all other product groups, the railways unload 50% more tonnage in Manitoba than they originate here. The manufacturing and miscellaneous sector accounts for 40% of railway traffic unloaded in Manitoba. There are large movements of consumer goods from Eastern Canada and several important manufacturing firms in Manitoba rely on rail transport for inputs of raw materials. The movement of WGTA grain to Manitoba is Saskatchewan grain exported through Churchill.

Table 9.8 shows railway average revenue, average haul and average carload for all domestic carload revenue traffic moving in Canada in 1985. The table starts with all Canadian traffic and then shows separate figures for traffic from Manitoba and traffic to Manitoba.

Table 9.8: Rail Average Revenue, Average Haul and Average Carload:

Major Commodity Groups-1985

	Average Revenue cents per		Average Haul	Average Carload
	ton-mile	car-mile	miles	tons
All Canadian Traffic				
WGTA Grain	2.65	214.9	952	82.0
Agriculture	3.48	225.5	781	69.7
Animal	7.15	233.1	1485	36.2
Mine	2.99	296.0	574	95.2
Forest	4.15	244.5	584	59.7
Manufacturing and Miscellaneous	5.34	226.2	860	51.5
Total	3.52	245.3	708	76.2
Traffic From Manitoba				
WGTA Grain	3.09	244.0	757	81.2
Agriculture	3.04	191.9	939	65.9
Animal	7.36	217.3	1421	29.4
Mine	5.38	473.9	287	87.9
Forest	5.72	323.5	241	60.4
Manufacturing and Miscellaneous	4.05	225.0	904	55.6
Total	3.42	248.1	711	75.8
Traffic To Manitoba				
WGTA Grain	2.77	168.3	869	60.6
Agriculture	5.32	281.4	683	65.9
Animal	6.92	265.4	1138	42.6
Mine	4.69	410.9	349	84.0
Forest	5.08	284.8	652	58.3
Manufacturing and Miscellaneous	6.26	226.0	1133	41.1
Total	5.39	243.3	864	55.1

Source: Canadian Transport Commission, Traffic and Tariffs Branch, Reference Paper No. 1.11, Commodity Flow Analysis 1985, (Ottawa: Queens Printer 1987) Table 11 and, for traffic to Manitoba, VMTI calculations from Tables 1 and 5-10.

The lowest railway revenue per ton-mile was for grain carried under WGTA rates. The figure of 2.65 cents per ton-mile covers the payments received by the railways both from government and the shipper. The government contribution to railway fixed costs was still in the process of phase-in in 1985; if this had been at the full level of contribution required for the crop year 1986-87 and onwards, railway revenue per ton-mile on WGTA grain would have been some 2.83 cents.

Railway revenue per ton-mile is higher on grain originating in Manitoba than the overall Canadian average for this traffic. The average length of haul is less than from the rest of the prairies and the rate per ton-mile is higher for short distance hauls. Nevertheless, grain from Manitoba may be assessed an unduly high freight rate compared with grain from Saskatchewan and Alberta. There are two reasons for this. Firstly, the statutory rate scale for grain probably over-compensates the railways for short-distance movements and under-compensates for long distance movements. Secondly, Manitoba grain moves across fairly easy terrain to Thunder Bay, compared with grain crossing the Rockies for export from British Columbia. The statutory freight rate scale gives only imperfect recognition to the extra costs involved in the westward movement. Currently, the National Transportation Agency is investigating both these issues. The Province of Manitoba does not have the data necessary to undertake an independent investigation, but it should continue to keep this matter under active review in its discussions with the federal government.

WGTA grain destined for Manitoba is for export through the Port of Churchill. The distance travelled by this grain is only slightly below the system average and hence the railway revenue per ton-mile is only slightly above the system average. The low average carload for traffic destined to Manitoba is because of weight restrictions on the line to Churchill.

Products of agriculture yield a return per ton-mile to the railways comparable to that received on the aggregate of all traffic. Products of agriculture from Manitoba pay rather less than average, but traffic to Manitoba is assessed at a considerably higher rate. This incoming traffic could consist mainly of fruits and vegetables demanding special treatment; however, the present study has not investigated this matter.

Animal products yield a very high revenue per ton-mile, but this is not surprising given the heavy costs involved in the transport of meat and livestock. The Manitoba figures are in line with those for Canada.

Mining products yield the lowest return to the railways in terms of cents per ton-mile, but these products are easy to handle and yield economies from heavy carloadings. Products of mines originating from or destined to Manitoba pay a considerably higher rate per ton-mile than the Canadian figures as a whole. However, this Manitoba traffic is short haul and average tonnage per car is below the national figure. This is at least a partial explanation of the differential on cents per ton-mile in the mining industry, but this issue has not been examined further in the present study.

In forest products, the railways enjoy revenue per ton-mile somewhat above their overall average, but length of haul and average carloading are both on the low side. Traffic from Manitoba and traffic to Manitoba both produce average revenue per ton-mile higher than the Canadian average. Manitoba carloadings are almost the same as for Canada as a whole, but the length of haul is quite low for traffic loaded in Manitoba. There is no such obvious explanation for traffic destined to the province and this would bear further examination.

In the manufacturing and miscellaneous group, the railways earn their highest revenue per ton-mile (apart from that earned on the relatively small movement of meat and livestock). The manufacturing and miscellaneous group is very heterogeneous, including iron and steel in both primary and manufactured form, machinery, passenger automobiles, gasoline and fuel oil, special dangerous commodities such as liquified petroleum gas, woodpulp, newsprint, paper, sugar, beverages, dairy and other food products, vegetable oils and fertilizers. There are obvious dangers of superficiality in commenting on such a heterogenous group.

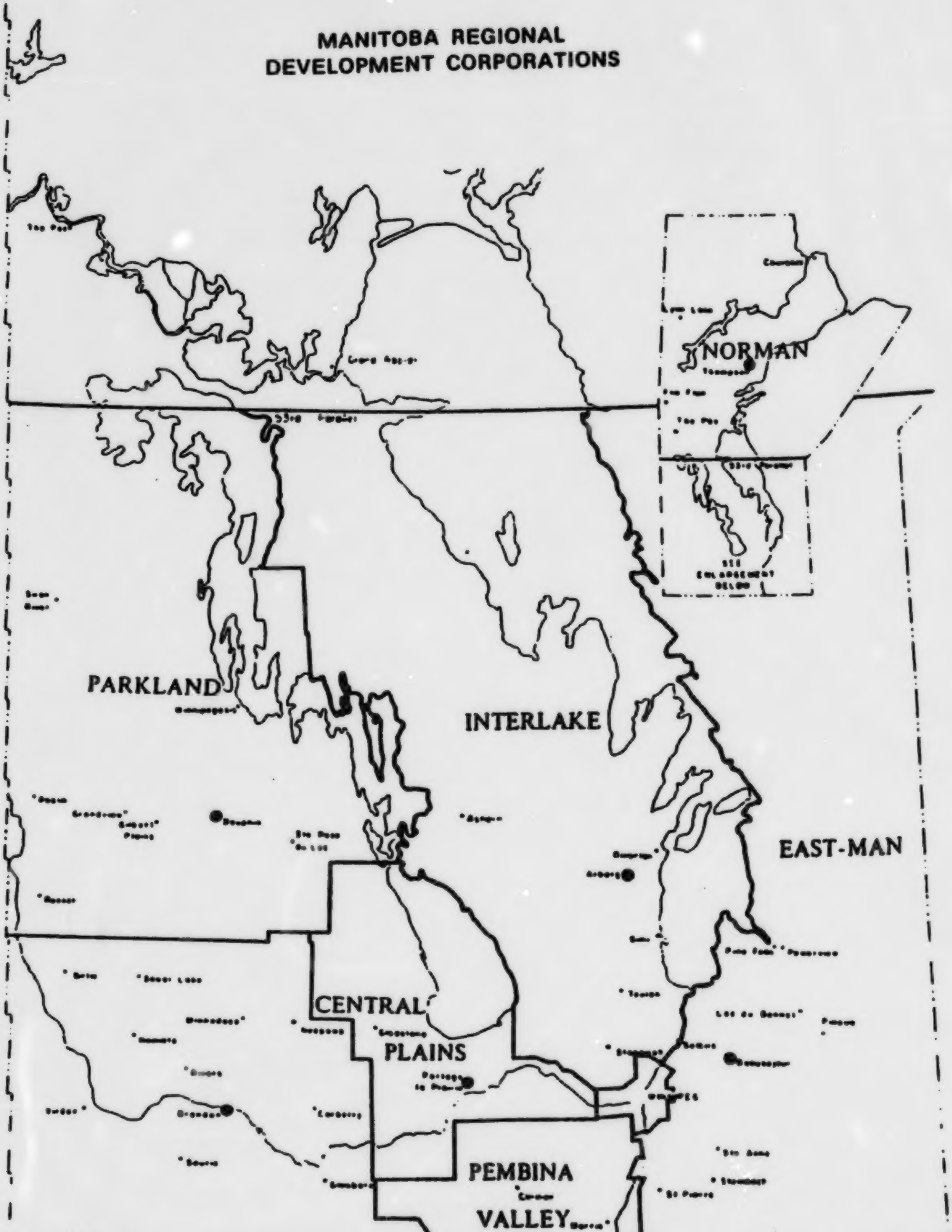
Manitoba does not appear to have a problem on the rate per ton-mile for manufacturing and miscellaneous traffic originating in the province. On traffic destined to Manitoba, the rate per ton-mile is some 0.9 cents higher than the national figure. Part of this difference can be explained in terms of lower carloadings on the type of product dispatched to Manitoba, as the difference does not extend to the column labelled average revenue per car-mile.

It had originally been the intention to include an analysis of truck rates in the present section, but the published data do not allow this. For what the figures are worth, there does not appear to be any evidence of discrimination for or against Manitoba. Given the level of competition in the trucking industry, this would be the expected result.

9.3 TRANSPORT CONCERNS IN RURAL MANITOBA

Chapters 7 and 8 included reports on interviews with Manitoba shippers located outside Winnipeg. Contact was also made with Regional Development Corporations in respect of transport concerns in each area of the province. A map of the areas covered by each corporation is included on page 243. There is no longer a Regional Development Corporation covering Western Manitoba and a visit was therefore made to the Brandon Economic Development Board.

MANITOBA REGIONAL DEVELOPMENT CORPORATIONS



The objectives of the present study were explained to the Boards of Directors of the Regional Development Corporations as follows: Brandon Economic Development Board - August 4, 1988; East-Man - June 29, 1988; Interlake - November 14, 1988; Parkland - February 18, 1989; and Pembina Valley - June 15, 1988. In view of the size of the Norman Region, rather than have a formal meeting with the Regional Development Corporation, the Regional Manager arranged individual meetings at Thompson, Flin Flon, The Pas and Churchill in the period October 3-6, 1988. The first three Norman meetings are reported at the end of the section. It was more convenient to discuss the Churchill meeting in the section on the Port of Churchill in Chapter 2 and the material is not included again.

The cooperation and assistance of the Presidents, Members and Managers of the Regional Development Corporation were very much appreciated, particularly as this included arrangements for meetings with local industries in each area. The major purpose of this section of the report is to document the concerns which were raised.

9.3.1 Brandon Economic Development Board

The major transport problem raised in Brandon was air service and this was evident from meetings with the Economic Development Board and with the then mayor, Mr. Ken Burgess. The history of air service in Brandon has been outlined in Chapter 3. Potentially, the Brandon Airport serves not just the City of Brandon, but the whole of South-West Manitoba and Eastern Saskatchewan, with a population of some 250,000. Community leaders believe that the economic development of Brandon is hindered by inadequate air service. Service between Brandon and Winnipeg was compared adversely with similar situations in the U.S.A., for example service between Pocatello, Idaho, and Salt Lake City. Potential customers have preferred to drive between Brandon and Winnipeg, the carrier has complained of inadequate demand, and the air service has suffered. The problem of inadequate air service has been a source of complaint in Brandon for at least two decades.

The Brandon Economic Development Board also considered that there was a need for service from Brandon westward to Regina and Calgary. Flying from Brandon to Northern Manitoba was also a lengthy process, involving a trip to Winnipeg, but there was no suggestion that direct flights from Brandon to the north could be economically feasible in the immediate future.

There was general satisfaction with the quality of trucking services provided to Brandon, but problems were raised with respect to the low frequency of service from Brandon to Northern Manitoba, with this usually on a once a week basis. There were also some complaints about lack of flatbed equipment in the trucking industry and the non-availability of busline agents in smaller communities around Brandon. Rail service was not raised in the general meeting and this has been addressed, where applicable, in reports on interviews with Brandon companies included in Chapter 8.

The major problem on the highways was the need to twin the Trans-Canada Highway to the Saskatchewan border. The condition of the Trans-Canada was regarded as good and, although Highway 2 was in bad condition in some places, this was then in process of being repaired. Concern was expressed in respect of branchline abandonment and the switch of grain off rail; although this was not expected to have much effect on the main highways, the damage to minor roads could be considerable. This has already been addressed in Chapter 4 and was a concern in almost all areas visited.

9.3.2 East-Man Regional Development Corporation

The condition of highways in this region was regarded as satisfactory and there were no complaints relating to truck transport. Specific criticisms included the view that Highway

59 was over-utilized; that Highway 304 was not in satisfactory condition; and that the bridge over the Winnipeg River at Lac du Bonnet was far too narrow. UMTI sent a staff member, who is a civil engineer, to look at the bridge at Lac du Bonnet and he has reported a need for improvement to the Manitoba Department of Highways and Transportation.

9.3.3 Interlake Regional Development Corporation

The meeting with the Interlake Regional Development Corporation included representation from Super Six, the development organization established for communities along Highway 6. Fears were expressed of deterioration of the roads as a result of branchline abandonment; the need for compensation was raised for farmers incurring increased costs when lines were abandoned; and it was suggested that reduced rail service could mitigate against industrial development.

Although the condition of Highway 6 was not raised as an immediate cause for concern, it was felt that increased grain traffic and particularly heavy truck movements of limestone from Gypsumville could have an adverse effect on the highway. Trucks went empty from Winnipeg to pick up the limestone at Gypsumville, making this commodity the main reason for the haul. Surprise was expressed that the railway was not competitive with the trucking industry on this limestone haul, but subsequent investigations by UMTI confirmed that this was apparently the case.

The issue of transportation of dangerous goods was raised and UMTI staff outlined the improved safety standards which had been implemented for all transport modes over recent years. Problems of operating a rural trucking industry were discussed. The proprietor of a leading trucking company expressed the view that, if the value of operating authorities were destroyed by regulatory change, compensation should be paid.

9.3.4 Parkland Regional Development Corporation

The meeting with the Parkland Regional Development Corporation covered a number of issues of concern in most of the rural areas of the province and there was also considerable discussion on the role of VIA Rail.

Fears were expressed that roads would deteriorate as a result of branchline abandonment, but it was thought that there had already been a considerable deterioration in the quality of roads in the region. The coverage of the present road network was adequate, but the condition was compared unfavourably with Saskatchewan. Concerns were expressed as to the effect of larger trucks on the road infrastructure and it was suggested that these large trucks were not paying their full costs of road utilization. In the export of grain, there was concern that Churchill was suffering from unfair favouritism of the St. Lawrence Seaway route.

Adverse comments were made on the high cost and low utilization of railway passenger services, particularly on the Winnipeg - The Pas sector. Dauphin has passenger train service three times a week as part of the Winnipeg - Churchill service. However, it was claimed that virtually nobody in Dauphin ever used the service. (A subsequent check showed that this was not surprising; the northbound train left at 1:50 a.m. and the southbound train at 4:20 a.m..)

9.3.5 Pembina Valley Regional Development Corporation

The major issue raised by the Pembina Valley Regional Development Corporation was the state of the highways in the region, particularly Highway 3. The effects of branchline closures on road maintenance costs were also discussed. Truck transport was not raised as an issue; visits to local industries in the area had indicated very few trucking problems.

Passenger transport did not arise as a spontaneous issue, but only as a result of prompting at the meeting. The general view was that Pembina Valley residents had to rely on their own transport and that bus services were not an important passenger transport mode. Apart from the Parkland comments on VIA, passenger transport in rural areas did not arise as a spontaneous issue in meetings with Regional Development Cooperations in the south.

9.3.6 Norman Regional Development Corporation

Consultation with the Norman Regional Development Corporation consisted of a sequence of meetings with community and business leaders in Thompson, Flin Flon and The Pas. (There was also a meeting in Churchill, but this has already been reported in Chapter 2). The meetings were arranged by the Manager of the Corporation, who was present at all meetings, and UMTI was also able through these arrangements to obtain the views of the various Norman Directors. The full participation of community and business leaders at all locations demonstrated the significance of transport concerns in this large and sparsely populated area. However, it was made clear to all participants that UMTI was visiting the north as part of an overall examination of transportation in Manitoba to the year 2000, rather than conducting a specifically northern study. It was important to guard against raising expectations of a detailed analysis of northern transportation problems, which would not be fulfilled in the report.

A well attended meeting in Thompson included Mayor Don Maclean and Ms. Norma Taylor, Chairperson, Norman Transportation Committee. Concerns about air transport were expressed for both passenger and freight traffic. The Thompson community leaders felt that airports and facilities in Norman needed upgrading; landing strips required lengthening and resurfacing to accommodate some of the larger aircraft; and navigational aids were lacking in some remote areas.

A multi-modal distribution centre for freight shipments was suggested to deal with the problem of returned shipments because there is no one at the airport to receive them. Those in attendance felt that there were private investors who would construct such a facility, but seemed to think that government should act as a catalyst here. It was suggested that Thompson was a logical choice as a transportation and distribution centre for the remote northern communities.

Concerns with respect to truck transport revolved around the perception that there were disparities in the regulatory environment in regards to north-south movements versus east-west movements. The northern communities felt they were being discriminated against in terms of allowable weights and dimensions on the highways. (The Manitoba Department of Highways and Transportation subsequently commented that allowable weights and dimensions are being increased on the basis of safety and the ability of the physical plant to support such increases. Intermittent permafrost in the north means that increased weights could shorten the service life of northern roads.)

Rail transport evoked a strong response from the Thompson group and the general feeling was that attempts by the provincial government to secure a railbus service had been frustrated by the federal government and railway personnel. Bus service was deemed to be very good for the movement of passengers and freight. A "combo" bus has recently been developed which expands freight carrying capacity.

The well-attended meeting in Flin Flon was with Mayor Gord Mitchell, his council and local business leaders. Concerns were expressed in regards to lack of competition in trucking, as this was shortly after the demise of Route Canada, the poor and excessively expensive air service out of Flin Flon and the need for air navigational aids in some remote areas. Air service was considered so expensive that the only travellers were civil servants, businessmen and others whose fares were paid for them.

Despite the time required to make the journey to Winnipeg, business and community leaders were generally very satisfied with the bus service especially for smaller freight movements. Highway 10 was considered to be in good condition and the dimensional restrictions on traffic caused by the West Channel bridge were now being mitigated with the construction of a new open bridge.

Due to the importance of the forestry industry in The Pas, many of the concerns expressed at the meeting there revolved around this industry. Allowable weights and the condition of some of the roads were highlighted by a contractor who hauled logs to the Repap plant. Another representative at the meeting suggested that the Hudson Bay Railway to Churchill be upgraded so that forestry products destined for European markets could be shipped through Churchill.

Concerns in regard to the poor and expensive air service were expressed on much the same grounds as at the two previous meetings. However, it was also recognized that, despite perceptions that anything less than jet service is a degradation of service, scheduling of flights might be improved by the use of less expensive aircraft such as the Dash 8. Given the size of the airport, it was suggested that upgrading was necessary including an instrument landing system (ILS). The chairperson of the Norman Transportation Committee described the lack of privacy for medical patients being transported by air. Although this situation has been brought to the attention of the airline involved, there has not yet been a solution to this problem.

The bus service from The Pas to Winnipeg was described as excellent, taking little more than seven hours. Freight service provided by the bus was also held in high regard.

9.4 PASSENGER TRANSPORT

The quality of passenger transport has not been addressed in any depth in the study and the comments below are much less detailed than in the case of freight transport. The discussion commences with interviews with the Winnipeg Chamber of Commerce and the Winnipeg Business Development Corporation. Material on rural Manitoba is reviewed briefly from section 9.3 above. Comments are then made on interviews with the Manitoba Chapter of the Consumers' Association of Canada, the Manitoba Motor League and Transport 2000. The purpose of this section is to document the concerns raised.

9.4.1 Winnipeg Chamber of Commerce

Meetings were held with the Transportation Committee of the Winnipeg Chamber of Commerce on September 22, 1988 and again on January 25, 1989. The major objective of these meetings was to obtain input on Winnipeg's needs in passenger transport, but useful information was also received on other subjects. In particular the overall object of the Transportation Committee was very relevant to the present UMTI study. This reads as follows: "To enhance transportation as a service and an industry in Winnipeg and to strengthen Winnipeg's position as a national transportation centre".

In the air mode, there was considerable complaint about the quality of service to the United States, particularly the dependence on the Minneapolis link served by Northwest Airlines. Major service needs to the United States were a second airline to serve Minneapolis and a direct connection from Winnipeg to Denver. (As indicated in Chapter 3, a link to Denver was obtained in June 1989 but, after a loss of roughly $1.5 million, this was discontinued in December, 1989.) There were no spontaneous complaints about domestic air services within Canada, so Chamber members were asked if they had any specific problems in this area. The response was very reassuring for the airlines - service quality was rated as very good and this was considered a major attraction for Winnipeg.

The situation in air freight was regarded as less satisfactory, but this seemed to be primarily due to lack of volume. One Chamber member considered that there was an opportunity in Winnipeg to attract air freight for the whole of central Canada, with onward transmission by truck as well as by air, but developmental support would be needed from government to absorb the initial costs.

Transportation Committee members had few comments on the highways in respect of business travel. The Trans-Canada Highway in Manitoba is multi-lane divided for 80% of its length and this was a higher percentage than in any other province. Rail passenger transport was considered to be irrelevant to the business traveller.

9.4.2 Winnipeg Business Development Corporation

A meeting with the Winnipeg Business Development Corporation took place on September 23, 1988. The discussion on air transport confirmed the previous day's discussion with the Winnipeg Chamber of Commerce. There were no complaints about domestic air passenger services and the high quality of air transport contributed significantly to Winnipeg's role in both manufacturing and distribution. Air service to the United States was less satisfactory and views similar to those of the Winnipeg Chamber of Commerce were expressed. The need to develop air freight was again outlined.

The Winnipeg Business Development Corporation stressed the size of the markets within easy reach of Winnipeg. A population of 64 million people was to be found within two days' trucking distance of Winnipeg. Good highway transport was essential and the current efforts to provide four lanes on Highway #75 were welcome, if greatly overdue. The poor state of Highway #3 was noted and this had also been raised by the Pembina Valley Regional Development Corporation. The rail freight link to the United States provided by Burlington Northern was considered to be very valuable to Winnipeg. No reference was made to rail passenger transport, as this is of little importance to the business traveller.

9.4.3 Concerns Outside Winnipeg

These concerns have been outlined in section 9.3 and the present section merely enumerates the major passenger issues raised by communities outside Winnipeg. Inadequate air service for Brandon is obviously high on the list. There were some complaints on the quality of highways in Southern Manitoba, but these were relatively few. The bus is regarded as useful, especially for urgent freight shipments. Private motoring is by far the dominant passenger transport mode. Rail passenger service is long gone and does not appear to be particularly lamented.

In Northern Manitoba there were frequent complaints about the quality and cost of air services. Except for Churchill, which of course has no highway connection, there seemed to be few complaints about the highways and comments made on bus services were generally favourable. Rather surprisingly, there was little mention of rail passenger service in the major cities of the north, but there was still a deep sense of frustration in Thompson at the lack of success of efforts to create a railbus service.

9.4.4 Consumers' Association of Canada

The Manitoba Chapter of the Consumers Association of Canada (CAC) receives between 300 and 400 telephone calls per month, many of which relate to transportation. In respect of passenger transport, CAC highlighted the following inadequacies: the need to link the existing railway, bus and airport terminals in Winnipeg to reduce the cost of intermodal connections; the poor air service to Brandon; the need for highway upgrading; and, based on a 1988 national CAC study, lack of adequate safety standards in smaller aircraft. Of the passenger modes, bus service was rated most highly, especially in view of its performance in competing against a heavily subsidized railway passenger service.

In addition to comments on passenger transport, CAC also outlined its program of monitoring food prices in the province and its scepticism as to the explanation offered for price variations in terms of differences in transport costs. In the third quarter of 1988, as compared to Winnipeg, food prices were 3% higher in Selkirk, 9% higher in Portage la Prairie, and 6% higher in Brandon. Transportation costs were a convenient but inadequate explanation of these differentials, which were often caused more by variations in the extent of retail competition.

9.4.5 Manitoba Motor League

The Manitoba Motor League provided the Statement of Policy adopted by the Canadian Automobile Association for the year ending June 30, 1988 and indicated support for these objectives from Manitoba. The recommendations covered a wide area of activity including taxes on transportation fuel; national energy policy; oil industry support to secure petroleum self-sufficiency; the transport of dangerous goods; police activity in respect of criminal code offenses; and drug and alcohol awareness education programs. The Manitoba Motor League is also very concerned about the possible effects on private motorists from relaxed vehicle weight and dimension limits for heavy trucks.

The upgrading of Highway #75 was regarded as extremely important by the Manitoba Motor League and this is the general view of business in the province. Overall highway expenditure was considered inadequate and this has been reviewed in Chapter 4. The Manitoba Motor League has no problem with user charges, as long as government takes into account what is already being paid by the private motorist, the relative costs caused by private motorists and highway freight traffic, and the extent of the recovery of government expenditures in other transport modes.

9.4.6 Transport 2000

Transport 2000 is a national public interest group concerned with improving public transport. The mandate covers all modes - rail, bus, air and urban transit - but efforts of the Manitoba Chapter over the last few years have been directed mainly at rail transport, as this has been regarded as the public transport mode at greatest risk.

Transport 2000 operates primarily as a provider of information and as a lobby group. In recent years, the Manitoba Chapter has been most active in opposing cutbacks in rail passenger services. It has also strongly supported the provision of new rolling stock for VIA Rail. In 1983-84, the Chapter was active in trying to reinstitute rail service from Winnipeg to Minneapolis, cooperating with communities in Minnesota and North Dakota, but these efforts were not successful.

Like the Manitoba Chapter of the Consumers' Association of Canada, the Manitoba Chapter of Transport 2000 has been concerned with the need for greater integration of intermodal passenger services in Winnipeg, specifically the consolidation of bus and rail services at the present CN Rail Station and the provision of better services between that location and the airport. There has been some activity in respect of airline deregulation and the resultant competition with other modes, and with air fare discrepancies, particularly in Northern Manitoba. The Manitoba Chapter has not been actively involved in urban transit but this would also fall within its mandate.

9.5 PROSPECTS AND CONCERNS

This section commences with a summary of the findings of Chapter 9. Interviews with transport users in Chapters 7 and 8 have already been summarized at the close of each chapter. The section then discusses prospects and concerns arising from all three chapters.

The major findings of Chapter 9 are summarized as follows:

1. In 1987, a shipper survey relating mainly to manufacturing industry was carried out under a contract from TIDAC by R.L. Banks and Associates Inc. and J.S. Merrett and Associates. Highway transport was the major transport mode used for both inbound and outbound shipments, with commercial trucking in first place, followed by private trucking. Truck service was supplemented by courier and bus, but the role of rail was more limited.

2. On quality of service, the survey indicated that shippers were very satisfied with private trucking, commercial full-load trucking, courier service and the bus. Air service fared well except in respect of rates and the satisfaction rating on LTL trucking was also below average on this count. Although the railway received poorer ratings than other modes, this may have reflected the technological constraints on rail transport as much as the quality with which the service was being provided. Respondents were not satisfied with the post office, but this may have related more to poor letter service than to freight transport.

3. WGTA grain accounts for 72% of railway tonnage loaded in Manitoba. Rail shipments in the manufacturing sector from Manitoba are fairly modest, but this category accounts for 40% of rail shipments to the province, consisting of finished consumer goods and inputs for manufacturing industry. Historically, complaints in respect of freight rate discrimination were part of the economic fabric of Manitoba for almost a century. With increased competition, there is now much less evidence of discrimination and fewer complaints on this count.

4. Transport issues in Manitoba outside Winnipeg were examined mainly through meetings with Regional Development Corporations. During these meetings, UMTI met with about eighty representatives of rural areas in Southern Manitoba and about sixty representatives in Northern Manitoba. The overall impression was one of reasonable

satisfaction with most transport services. However, concerns were raised in respect of inadequate air service at Brandon and high air fares in Northern Manitoba; highway maintenance, particularly on Highway #3; and the effects of branchline abandonment on rural roads.

5. Discussions on the quality of passenger transport were carried out in much less depth than the meetings with shippers on freight transport. Domestic air services between Winnipeg and other parts of Canada are considered to be of high quality, but concerns arise in respect of service to the United States. Complaints in respect of air services at Brandon and in Northern Manitoba have already been noted. A need to link the existing railway, bus and airport terminals in Winnipeg was voiced. Transport 2000 expressed strong concern on the future of rail passenger transport.

As a general conclusion to Chapters 7 to 9, it would seem that the goods producing industries of Manitoba are no longer so heavily concerned with problems of transportation and freight rates. In many ways, this is a surprising conclusion in view of the centre stage position occupied by transportation for so many years in the history of the province. As has been shown in Chapters 7 and 8, transport costs are often not too large a proportion of product selling price and, where the burden is great, there are often good reasons in the nature of the product.

In grain, freight rates are fixed by the National Transportation Agency, 70% of the cost of transporting grain is paid to the railways by the federal government, and quality of service has improved since the railways began to receive adequate compensation for moving grain. The survey of other agricultural crops and livestock did not identify major transport problems; this is not to suggest that specific problems do not exist, but rather that they ought to be solved by case studies rather than by more general analysis. In the mining industry, criticisms of rail transport were made by one major shipper, but the mining industry is now less captive to rail. In the manufacturing industries, the dominance of truck transportation was noted, but rail was still the most important mode for roughly one-fifth of respondents. Several firms expressed lack of satisfaction with the quality of rail transport and this was the main complaint raised.

In a review of an earlier draft of part of this study, the Manitoba Department of Industry, Trade and Tourism indicated general agreement with our then provisional conclusions on the quality of freight transport. The Department stated that "the system is operating efficiently and does not appear to be a major impediment in the operation and/or enhancement of our manufacturing sector". The Department of Highways and Transportation has also indicated a reduction in the number of freight rate complaints brought to its attention. This improved situation would seem to have occurred as a result of increased reliance on trucking by Manitoba manufacturers, heavy competition within the trucking industry, greater truck-rail competition, an increased recognition by the railways of their customer needs, and the greater regulatory redress open to shippers as a result of the 1987 National Transportation Act.

In the past, the Manitoba government has been very active in analysis of the overall freight rate structure faced by the province, the freight rates likely to be incurred by new manufacturing firms locating here, and the rates and general transport and logistical problems faced by existing manufacturers. In part, it is the success of these activities that has allowed the improvements of the last two decades. The transportation situation will continue to be fluid over the next few years with the closer integration of the U.S. and Canadian economies, increased competition from U.S. trucking companies, and problems of duopoly in both the air and rail modes. The province should continue its work in monitoring service quality, resolving difficulties, and counselling on logistical problems.

Based on the contents of Chapters 7 to 9, this chapter closes with suggestions to the two levels of government.

1. The federal government should:

(a) continue its present studies through the National Transportation Agency to determine whether the WGTA rate scale discriminates against Manitoba shippers and eliminate such discrimination as may be found;

(b) ensure, through the monitoring process carried out by the National Transportation Agency, that the quality of rail transport is adequate to meet the needs of shippers and receivers in Manitoba;

(c) take action to ensure that regional development initiatives are not unduly hindered by inadequate air service to non-metropolitan centres such as Brandon;

(d) assist Manitoba to obtain improved overseas and transborder air services, as part of the continuing bilateral air service negotiations.

2. The provincial government should:

(a) continue its role in transportation policy analysis and its monitoring of the transportation industries;

(b) continue its programs of assisting Manitoba industries to improve logistics and transportation management;

(c) work with the railways to resolve problems raised by Manitoba manufacturing industries, recognizing that the rail mode is still the most important transport mode for one-fifth of Manitoba's manufacturing industries;

(d) encourage the communities of northern Manitoba to bring their complaints on air fares to the attention of the National Transportation Agency;

(e) continue to explore the potential for improved air services for Manitoba, particularly transborder services and direct flights between Winnipeg and Europe.

CHAPTER 10: THE TRANSPORT POLICY FRAMEWORK

This chapter was intended to be an overall review of transport policy issues. However, several policy matters have been more conveniently examined in other chapters. The taxation issue and the success or otherwise of previous planning exercises in the Manitoba economy were discussed in Chapter 1, although taxation is also included in the present chapter. The Port of Churchill has been addressed in Chapter 2. Expenditures on highway maintenance and construction were considered in Chapter 4. Government regulation of transport is the subject of Chapter 12.

With this lengthy list of policy matters addressed elsewhere in the study, the material to be covered in Chapter 10 is naturally much reduced. The chapter starts with a discussion of transport policy trends in recent years and this is followed by comments on the Western Grain Transportation Act. Section 3 relates to government subsidies and section 4 to government procurement activities. Section 5 returns to taxation, already addressed in a general way in Chapter 1. The chapter concludes with a summary and recommendations.

10.1 TRANSPORT POLICY TRENDS

The transport policy framework is, of course, a subset of the overall political framework. Some broad and probably generally accepted comments on overall policy development in the last few decades are useful as background. These comments are influenced in part from a recent publication, David Marquand: *The Unprincipled Society* (Jonathan Cape, London: 1988).

In Canada, as in most of the western world, it can be argued that the main policy planks from the end of the Second World War to the early 1970s were full employment, recognition of a mixed economy with private and public sectors, and a concern for the economic condition of the less wealthy members of society. Although there were obviously differences between the stress laid on each of these objectives by the different political parties, there was still a certain degree of consensus bounding the feasible set of policy options.

The inflation of the 1970s, the emergence of higher levels of unemployment and the economic burden of social welfare legislation have changed the policy options. The main alternative to have arisen in the last fifteen years has been a return to reliance on market systems, with stress on competition, privatization and a minimization of regulatory intervention. In addition, the economic activities of central governments have become increasingly constricted by preoccupation with problems of budget deficits.

Developments in transport policy in Canada have followed changes in the wider policy framework. In the thirty years following the Second World War, transport policy was formulated against a background of rapidly expanding air transport, which was heavily regulated; vastly increased highway transport, which was also heavily regulated; and a rail industry in difficulties which was heavily regulated, at least until 1967. The National Transportation Act of 1967 gave the railways a large degree of freedom in respect of rate matters and provided explicitly for compensation for publicly imposed duties in respect of rail passenger transport and uneconomic branchlines. However, the railways complained, with some justification, that the 1967 Act still left them very highly regulated - public interest rate appeals, the statutory grain rates, inadequate compensation for publicly imposed duties, and continued uneconomic operations in Newfoundland and Prince Edward Island.

Current transport policy in Canada, as captured in the 1987 National Transportation Act, reflects the generally increased reliance on markets in the Western World and is well-summarized in the government's slogan "Freedom to Move". The air industry has been substantially deregulated; the trucking industry has been substantially deregulated and more is to come over the next three years; and the rail industry has been both deregulated, for example on branchline abandonment procedures and confidential contracts, and re-regulated mainly in respect of competitive line rates.

The thrust to privatization has also been eagerly embraced in the transport field. This started with the comparatively modest task of privatization of the Northern Transportation Company Limited in 1985. Privatization of parts of the railway network has been mooted and an Alberta branchline of CN Rail became the Central Western Railway in November, 1986. The possibility of privatizing some rail passenger services has been raised, although the chronically uneconomic nature of passenger train operations in Canada means that this will probably be confined to a few luxury services. Air Canada was partially privatized in 1988, with the government announcing the complete privatization of this company in July, 1989. Transport Canada is currently negotiating lease agreements for airport management by private companies in several major airports, although earlier plans for the sale of major airports have now been abandoned.

In the area of fiscal policy, the problem of containing the federal deficit has become a major policy issue. This has been reflected in transport, particularly in that the federal government has made it clear that it is not prepared to continue to fund the financial drain of railway passenger transport. At the regional level, the federal government has now terminated the transportation components of the Economic and Regional Development Agreement with Manitoba, notwithstanding considerable activity here in 1984-89, as outlined in section 3 of Chapter 1.

The future of this thrust towards increased reliance on market forces is clearly relevant to the present study of transportation in Manitoba to the year 2000. Firstly, reliance on market forces tends to increase the pace of economic change as against the situation where change is slowed, modified, or stifled by a combination of government regulation and subsidy to uneconomic activities. Secondly, reliance on market forces may not be conducive to regional development initiatives. Greater reliance on competitive forces is not necessarily irreconcilable with a proactive regional development policy - as evidenced in the recent federal establishment of the Western Economic Diversification Office - but it does tend to generate pressures which work against government action to influence the location of economic activity. This is particularly important for the transport equipment manufacturing industries, where federal action to develop an automotive parts industry in Manitoba was advocated in Chapter 6. It could also affect the repair and overhaul activities of major transport carriers, which provide so much employment in Winnipeg.

At present, the philosophy of reliance on markets is dominant as an intellectual guiding force and as the inspiration of the policy framework. This is, of course, not confined to Canada and is even more marked in the United States and the United Kingdom. To anticipate the discussion in Chapter 12, reliance on market forces is likely to continue as the dominant influence on transport regulation until the mid-1990s. By then, given the inevitable swings in the pendulum of political change, reliance on market forces may have peaked and economic interventionism by government may be more common.

10.2 WESTERN GRAIN TRANSPORTATION ACT

Reference has already been made in Chapters 5 and 7 to the Western Grain Transportation Act (WGTA) and the current pressure to change the arrangement whereby the federal government pays its contribution to the cost of moving grain directly to the railways rather than to the grain producers. This could well be the most important transportation issue affecting Manitoba over the next year and a brief history is therefore presented. The Manitoba Minister of Agriculture has asked a newly formed Agricultural Advisory Council to advise on the "pay the producer" option. Extensive research has been carried out by Deloitte Haskins and Sells as consultants to the Council and three Discussion Papers have been publicly released.

The WGTA was passed in 1983 and took effect on January 1, 1984. Prior to this legislation, the rail transport of grain and grain products from the prairies was at statutory rates established in 1925, which incorporated, with many additions, the rate structure established under the Crow's Nest Pass Agreement of 1897. These rates covered all movements of grain and grain products from the Prairies to Thunder Bay/Armstrong and all movements of export grain and grain products to Vancouver and other Pacific ports and to Churchill. These statutory rates were popularly described as providing for the transport of grain at half a cent per ton-mile and, while purists may quarrel with the precision of this definition, it is a useful summary of the statutory rate structure.

As a result of inflation over the years, it became increasingly clear that the statutory freight rates on grain were very unprofitable for the railways and did not even cover the variable cost of rail movement. In early 1982, the Hon. Jean-Luc Pepin, then Minister of Transport, announced that Dr. J.C. Gilson of the University of Manitoba would head a formal consultation process on western grain transportation, that the government would commit monies towards seeking a solution to the problem of inadequate returns to the railways, and that grain producers would be required to make an increased contribution to the cost of moving grain.

Dr. Gilson submitted his report in June, 1982 and, with the exception of the method of payment to be discussed below, the main thrusts of his report were implemented. The WGTA took effect on January 1, 1984, with the most visible change the replacement of the statutory grain rates by a rate scale which provided for adequate compensation to the railways for the costs incurred in moving grain. This scale specified the rates to be paid by shippers and government in respect of grain moved over various mileages.

The government commitment to the cost of transporting grain was written into the legislation and the future size of this commitment was limited in the way suggested by Gilson. This was through a sharing of cost increases between grain producers and government and the limitation of the government commitment to the amount of grain moved in the 1981/82 crop year. The administrative responsibilities of government agencies were specified. The Grain Transportation Agency (GTA) was responsible for ongoing improvements to system efficiency and the Canadian Transport Commission (CTC), now the National Transportation Agency (NTA), responsible for the estimation of costs and rates, the processing of payments and the monitoring of investments.

In his report, Dr. Gilson had proposed that initially the government commitment to assist in the transport of grain should be paid to the railways and that there should then be a graduated change in the payment method so that payments were made directly to producers by 1989/90, apart from a small portion of the government payment which would be tied to the need to enforce railway performance guarantees.

In the period between receipt of Dr. Gilson's report and passing of the WGTA, the government set up task forces to examine several intractable problems. These included the question of whether the government payment should be made to the railways or to the producers, but the task force was unable to reach any consensus. In the end, the WGTA specified that the government commitment to the transport of grain should be paid directly to the railways, although the Act did not envisage that it was making a final judgement and provisions were made for subsequent review of this matter.

The "pay the railways" option was adopted in the WGTA partly because of strong support for this from the western grain cooperatives and the Quebec agricultural sector. The option was simpler to implement than "pay the producer" and it was less disruptive of previous arrangements. Freight rates increased only modestly from the Crow Rates, while "pay the producer" would have meant a vast increase in freight rates, accompanied by government payments to producers. The cost of moving western feed grains to Quebec and the Atlantic Region increased only marginally under "pay the railways". However, with feed grain prices in Quebec and the Atlantic Region dictated mainly by the prices of

U.S. corn, it is debatable whether "pay the railways" could have had much effect on feed grain prices in these areas.

As required by the WGTA, in April 1984, the government appointed a committee to examine whether the government contribution to the cost of moving grain should be paid directly to the railways or to the producers, with the railways then able to recover their costs in higher freight rates. The chairman of this committee was Mr. Justice Gordon C. Hall of the Manitoba Court of Appeal and he submitted his report in March 1985, recommending the "pay the producer" option. In 1986, the GTA conducted the first statutory review of the WGTA as required in the legislation. Again, a "pay the producer" option was recommended.

The proponents of "pay the producer" have criticized the "pay the railways" option under three broad categories. Firstly, it gives an artificial incentive for the transport of grain for export at the expense of its use on the prairies, both in livestock production and in other processing. Secondly, it prevents the competition of long-distance truck transport for grain, as the subsidy payments are only available for rail transport. Thirdly, on the international scene, it is regarded as an export subsidy, contributing to the surplus of export grain and depressed world prices.

As indicated in section 2 of Chapter 5, the railways have remained neutral on the "pay the producer" issue, but they believe that implementation of this option would have to be accompanied by considerable deregulation of grain transport by rail. They claim that they must not be inhibited in their response to new conditions, that present delays on variable rates for the transport of grain would have to go, that the existing structure of low density branchlines could no longer be maintained, and that the Canadian Wheat Board quota system would have to be changed to give the railways greater control over shipping patterns and to facilitate the use of solid grain trains.

Because of the ongoing work of the Manitoba Agricultural Advisory Council, referenced at the beginning of this section, this study refrains from making any recommendations on the "pay the producer" option. The probable effects of any implementation of "pay the producer" on the transport modes are taken into account later in the study.

10.3 TRANSPORT SUBSIDIES

This section starts with an attempt to describe the extent of transport subsidies incurred by federal, provincial and municipal governments across Canada. The data are obtained from issues of *Transport Review: Trends and Selected Issues*, published by the Research Branch of the former Canadian Transport Commission. The last publication was dated 1985 and this is used below, together with some material from the 1983 edition. Transport Canada is to publish an updated edition of this publication in 1990. However, as indicated earlier in Chapter 5, there has been no thorough study placed in the public domain in the 1980s on the relation between government expenditures and receipts in the various transport modes. This is a major information gap and the material summarized as follows is now somewhat dated:

(i) In 1983/84, estimated expenditures on transport by all levels of government in Canada - federal, provincial, and municipal - totalled $7.9 billion. The majority of these expenditures were in the provision of transport facilities and services, but the total also included direct subsidy payments to carriers which amounted to $1 billion. Expenditures of crown corporations, such as the Canadian National Railway Company and the St. Lawrence Seaway Authority, were not included in these figures.

(ii) The proportions of government expenditures on transport facilities, services and subsidies fluctuate from year to year between the various modes, but the breakdown of expenditures for 1983/84 was reasonably representative. Highways accounted for 80% of total expenditures, the air mode for 8% and water and rail for 6% each. The highway expenditures were provided overwhelmingly by provincial and municipal governments. The federal government provided almost all the rail expenditures and most of the expenditures on the air and water modes.

(iii) Using 1979 data, as the corresponding figures were not published for 1983/84, user charges, levied mainly through licence fees and fuel taxes, allowed the recovery of 42% of total expenditures by all levels of government on the highway mode. (However, the Manitoba Department of Highways and Transportation has commented that the recovery rate is much higher than this in Manitoba.) Cost recovery in the air mode was at 36% and the marine mode at 20%. Government expenditures on the rail mode, which at that time were mainly subsidies for uneconomic prairie branchlines and uneconomic passenger services, did not produce any corresponding revenue.

(iv) The net government subsidy in each transport mode can be expressed as a percentage of total expenditures by government and users of the mode. This gives a measure of subsidy in relation to total modal expenditures. On latest available figures for 1979, unrecovered government expenditure was lowest on the highway mode at 10%. The rail and air ratios were next at 14% and marine was highest at 22%. However, as in any exercise on subsidies, the benefits are not enjoyed purely by the supplier but are also shared with the users. For example, the railways would argue that payments to the rail mode for the transport of grain benefit grain farmers rather than rail carriers.

In spite of the lack of recent data, it is clear that government expenditures on transport are very substantially higher than government receipts and that the subsidy bill is very heavy. As already indicated, the federal government is anxious to reduce transport subsidy expenditures. The extent to which highway infrastructure for the motor carrier industry is subsidized by governments and other users is, of course, currently a high profile issue. However, this falls beyond the terms of reference of the present study.

10.4 GOVERNMENT PROCUREMENT EXPENDITURES

Government purchases of capital goods, equipment and materials have often been used, in the words of former DRIE Minister Robert de Cotret, as an "instrument to support the development of underdeveloped regions". The intention in the present study was to assess the influence of government purchases on the transport service and transport equipment industries in Manitoba. However, although considerable effort was spent on this subject, the discussion in this section is confined to describing the issue rather than carrying out any in-depth analysis.

From a federal government publication entitled "Supply and Services Canada Contracts in Manitoba: Fiscal Year 1987/88", dated May, 1989, federal government procurement expenditures amounted to $9,572 million for the whole of Canada. Contracts awarded to Manitoba amounted to $337 million or 3.5% of the total in 1987/88. Of these Manitoba contracts, 79% by value were in manufacturing industry and transportation and communication. Only 17.5% of the value of Manitoba contracts was for consumption in Manitoba, with the rest of the goods and services shipped out of province, mainly to Ontario. The two major federal suppliers in Manitoba were Bristol Aerospace ($114.6 million) and Standard Aero ($81.8 million), who together accounted for 61% of the value of all Manitoba contracts.

Against Manitoba's 4.1% share of Canadian population, a 3.5% share of federal government contracts may not seem too bad. However, 1987/88 was a favourable year for Manitoba - averaged over the five fiscal years ending in 1987/88, the Manitoba share was 2.7%. Bristol Aerospace and Standard Aero had a very good year in 1987/88; total contracts of the two firms amounted to $196.4 million against $76.2 million in 1986/87. Perhaps the large value of contracts awarded in 1987/88 was in part to make up for Bristol's loss of the CF-18 contract in October 1986.

Total Manitoba government and crown corporation expenditures on capital equipment and materials currently amount to about $700 million, but a breakdown of this relevant to the present study was not readily available.

Under the Canada-United States Trade Agreement, government procurement has to be approached in the spirit of competitive fairness, but this is subject to the proviso of consistency with national security. This would seem to open the door for the continued use of procurement policy to promote regional development in the very large area of defence expenditures. The recommendations in the present chapter include the need to use procurement policy to assist in regional development of the transport service and transport manufacturing industries.

10.5 TAXATION

In its publication The National Finances, 1987-88, the Canadian Tax Foundation estimated that the federal tax burden in 1987 amounted to 16.5% of Gross National Product (GNP) against 15.0% two decades earlier. The local government burden was equivalent to 3.3% of GNP in 1987, rather lower than the figure of 4.2% in 1967. It was in the area of provincial taxation across Canada that the tax burden had increased most, from 8.3% of GNP in 1967 to 12.4% in 1987.

Taxes were reviewed in a preliminary way in Chapter 1 and also discussed in the earlier chapters on the individual transport modes and the transport equipment manufacturing industry. The purpose of the present section is to bring these comments together and to extend the discussion to property taxes. Table 1.1 from Chapter 1 is reproduced below, with the Ontario personal income tax rate effective January 1, 1990.

Table 10.1: Comparison of Provincial Tax Rates - 1989

	Man.	Ont.	Sask.	Alta.	B.C.
Income - personal (% of federal rates)	52	53	50	46.5	51.5
- personal income surtaxes	yes	yes	yes	yes	no
- net income (%)	2	no	2	0.5	no
Income - corporations general rate (%)	17	15.5	15	15	14
General tax on paid-up corporate capital	0.3	0.3	0.5	0	0
Mining (% of profit)	20	20	12.5	0	12.5
Retail sales (%)	7	8	7	0	6
Unleaded gasoline (¢/litre)	9	11.3	10	5	7.7
Diesel fuel (¢/litre)	9.9	10.9	10	5	8.1
Tobacco (¢/cigarette)	6.5	3.8	6.7	4.8	5.0

Source: UMTI and Manitoba Department of Finance.

The following comments are made on Table 1.10.

(i) The personal income tax rate in Manitoba is 52%. The Ontario rate is 53% as of January 1, 1990. The personal income tax rate is 51.5% in British Columbia, 50.0% in Saskatchewan and 46.5% in Alberta, with these the three lowest rates in Canada.

In addition to the personal income tax rate levy, Manitoba also operates a 2.0% flat rate tax on net income, with this rate increased to 4.0% at higher income levels. Saskatchewan has a 2.0% flat rate tax on net income and Alberta has a flat rate tax of 0.5%, but this applies only to taxable income. No other province has a flat rate tax. Ontario, Saskatchewan and Alberta also impose a high income surtax; effectively, Manitoba also has this in its graded rate of flat rate tax. Considering all these personal income taxes together, Manitoba would seem to have the highest burden followed by Saskatchewan and Ontario. Personal income tax is appreciably less in British Columbia and Alberta.

Most provinces operate provisions for tax reductions for low-income earners and these are substantial in Manitoba. In addition, Manitoba, Saskatchewan and Ontario do not charge health insurance premiums, while these are charged by the two other jurisdictions considered in the comparison. The effects of this are discussed later in this section.

(ii) Provincial corporate tax, excluding the lower preferential rate for small business, is 17% in Manitoba. This compares with rates of 15.5% in Ontario, 15% in Alberta and Saskatchewan, and 14% in British Columbia. The small business tax rate is higher in Manitoba than in Alberta and British Columbia, but no worse than in Saskatchewan and Ontario.

All Canadian provinces, except Alberta, levy a capital tax applicable to banks, but Ontario, Manitoba and Saskatchewan also impose a general tax on paid-up capital of corporations operating within their boundaries. This is not levied in British Columbia and Alberta. The general tax in Manitoba is 0.3% for corporations with paid-up capital in excess of $1 million, together with a 0.2% surcharge for corporations with paid-up capital in excess of $10 million. There is a flat rate of 0.5% in Saskatchewan and of 0.3% in Ontario.

Manitoba levies a payroll tax of 2.25% on payroll for companies above a certain minimum size; the payroll limit for full exemption was increased to $600,000 effective January 1, 1990. The payroll tax in Quebec is 3.36%. Effective January 1, 1990, Ontario imposed a payroll tax of 1.95% on payroll over $400,000, with lower rates for payroll below this threshold. Other Canadian provinces do not have a payroll tax.

Considering corporate income tax, capital tax and payroll tax together for firms not classed as small business, it seems clear that Manitoba levies the highest tax burden of the five provinces considered. Ontario is in second place, followed by Saskatchewan. The tax bite is appreciably less in Alberta and British Columbia. However, this ranking does not hold for small business, which is exempt from payroll tax in Manitoba, pays a low rate of capital tax, and has a moderate rate of small business tax, with a tax holiday in the start-up stage. Small business tax rates would seem to be heaviest in Ontario, with Manitoba and Saskatchewan in a similar position, and Alberta and British Columbia again at the low end of the scale.

(iii) The retail sales tax rate is 7% in Manitoba. The figure is the same in Saskatchewan, 8% in Ontario and 6% in British Columbia, while there is no retail sales tax in Alberta.

(iv) Gasoline and diesel fuel taxes for highway use are higher in Manitoba than in Alberta and British Columbia, but lower than in Ontario and Saskatchewan.

For off-highway use, Manitoba levies a tax of 13.6¢ per litre on railway locomotive fuel. This tax is 15¢ in Saskatchewan, but in Ontario and the other Western Provinces it does not exceed 5¢ per litre. As explained in Chapter 5, this tax on locomotive fuel is very much resented by the railways. The railways argue that, unlike the trucking industry, they receive no return from fuel taxes in the provision of infrastructure and that this tax is inequitable, leading to an inefficient allocation of resources in surface transportation.

(v) On specific taxes, Manitoba generally imposes heavier taxes on tobacco - and also on alcohol, which is not shown in the table - than the average of the four jurisdictions surveyed.

While it is difficult to summarize the mass of data on different taxes, nevertheless a pattern of high taxation in Manitoba emerges fairly clearly. However, this is less marked now than it was a year ago - the tax burden has been reduced in Manitoba, while it has increased in other provinces.

The following table of tax burden is taken from the 1989 Saskatchewan Budget. It shows personal taxes that would be paid in various jurisdictions by a family of two adults and two children at the family income specified. The taxpayer is assumed to be the only earner in the family and the various assumptions made are explained clearly and appear to be appropriate. Total taxes are defined as provincial income tax, less tax credits and rebates, plus health premiums where applicable, estimated retail sales tax and estimated gasoline tax. The Ontario figures include health premiums, which were subsequently eliminated effective January 1, 1990.

Table 10.2: Provincial Tax Burdens by Family Income

	$20,000 $	$40,000 $	$60,000 $
Manitoba	982	4,540	8,790
Ontario	2,201	4,818	8,180
Saskatchewan	997	4,187	7,917
Alberta	1,165	3,414	6,124
British Columbia	1,520	3,976	7,048

The comparisons in Table 10.2 were made before the various provinces had brought down their 1989 budgets and the relative position of Manitoba taxpayers has since improved. At family income of $20,000, Manitoba has the lowest tax burden. With the 1989 provincial budget, the Manitoba Department of Finance has estimated that this tax burden has fallen to $558. At family income of $40,000, the Manitoba tax burden was higher than for the other Western Provinces, especially Alberta, but still below Ontario. Following the 1989 budget, the Manitoba tax burden is estimated to have fallen to $4,028, placing the province in third place. At family income of $60,000, Manitoba takes top place.

A similar table is not produced for corporate taxpayers, but several points are worth making on the basis of the interviews carried out by UMTI for the present study and reported in earlier chapters. Firstly, it is common knowledge among Manitoba corporations that tax levels - both personal and corporate - are higher here than in many other jurisdictions. Alberta is generally identified as the low taxation province, while comparisons were also often made with lower tax burdens in the United States. Higher personal income taxes were often mentioned, although there did not seem to be great resentment except among managers who had been recently moved to the province. Apart from the payroll tax, the corporate tax burden also raised less comment than might have been expected, but this may have been because the UMTI interviews were mainly with operating management rather than with financial management. Fuel taxes were considered high mainly in relation to the United States rather than other Canadian provinces. The retail sales tax produced no comments, but this is not out of line except with Alberta.

Three general comments should be made. Firstly, hostility towards the payroll tax was marked. There were no advance rumours at the time of the interviews in respect of Ontario's intention to introduce a payroll tax. However, this may not reduce the resentment caused by the Manitoba tax, as any threatened relocation of industry was in the direction of Alberta rather than Ontario. Secondly, the locomotive fuel tax is strongly resented by the railways on grounds of equity and misallocation of resources. Thirdly, the low taxation mecca to Manitobans is clearly Alberta, with hardly a mention of British Columbia, although the main tax difference between these two provinces is confined to the absence of sales tax in Alberta.

The discussion now turns to property taxes and draws mainly on the Property Tax Survey carried out by the City of Edmonton for 1987. This material has been publicly released and a copy of the report was provided to UMTI by the City of Winnipeg. The Edmonton survey covered 17 Canadian cities, but the present discussion omits four of these cities - Red Deer, Medicine Hat, Lethbridge and Fredericton - as these are too small for valid comparison with major cities. A listing of the 13 cities remaining is included under (a) below.

Comparisons were made of property taxes for municipal, school and other purposes, net of homeowner grants or credits, for a "sample house". The sample house was defined as "a detached three bedroom bungalow with the main floor area of 1,200 square feet on a 5,500 square foot fully serviced lot, five to eight years old, one car garage, full basement but no recreation room or fireplace".

(a) Of the 13 cities surveyed, Winnipeg ranked fifth highest in terms of the net property tax levy in 1987. Ahead of Winnipeg were, in order, Ottawa, North York, Hamilton and Regina. Winnipeg was followed by Toronto, Victoria, Saskatoon, Halifax, Vancouver, Calgary, Edmonton and Saint John. Information from the comparable survey for 1988 shows Winnipeg in fourth highest position - after North York, Ottawa and Hamilton.

(b) In terms of the effective mill rate, obtained by dividing the net property tax levy by the current market value of the house, Winnipeg was in fourth highest place, exceeded only by Regina, Ottawa and Hamilton. However, the net property tax levy considered under (a) is a more relevant measure.

(c) The study by the City of Edmonton also included an examination of annual utility charges in the various cities for telephone, electricity, and water and sewer, but excluding home heating; consumption was assumed to be the same in all cities. This comparison was made to guard against any cross subsidy between property taxes and utility rates. On annual utility charges, Winnipeg ranked #11 place from the top, i.e., with low utility charges. However, this saving was not sufficient to offset the high net property tax. Considering net property tax and utility charges together, Winnipeg again ranked fifth highest, preceded by the same four cities listed in (a) above.

(d) More recent house prices were available than those used in the City of Edmonton study. The Manitoba Real Estate Association provided UMTI with the average selling prices of houses in 19 major metropolitan areas of Canada in 1989, based upon Multiple Listing Service sales. These figures are not standardized for a specific sample house and variations between cities therefore reflect differences in average house quality as well as differences in price.

The average selling price in Winnipeg was $84,234 in 1989, which placed Winnipeg in #14 position out of nineteen metropolitan areas. Toronto and Vancouver were, of course, head of the list with average house prices in excess of $200,000. Six more cities were above the figure of $100,000 - in order, Hamilton, Victoria, Ottawa, London, Calgary and Montreal. The other five ahead of Winnipeg were, in order, Windsor, Sudbury, Halifax, Thunder Bay and Edmonton. In descending order of house prices, cities behind Winnipeg were Quebec City, St. Johns, Saint John, Saskatoon and Regina.

To conclude this discussion, Winnipeg is not an expensive city for house prices, but it is not an inexpensive city in respect of property taxes.

10.6 PROSPECTS AND CONCERNS

This section starts with a summary of Chapter 10.

1. The transport policy framework is a subset of the overall political framework. During recent years, transport policy in Canada has been characterized by increased reliance on competitive market forces, privatization of publicly owned transport carriers, and an attempt to reduce government subsidization of transport. Reliance on market forces is likely to continue as the dominant influence on the transport policy framework until the mid-1990s. By then, given the inevitable swings in the pendulum of political change, reliance on government forces may have peaked and economic interventionism may be less out of favour.

2. The history of the Western Grain Transportation Act was reviewed. The financial commitment of the federal government towards the movement of western grain is presently

administered as a payment to the railways, but conversion to "pay the producer" is currently a major transportation policy issue. Because of ongoing work requested by the Manitoba Minister of Agriculture of the Manitoba Agricultural Advisory Council, no recommendations are made on this issue.

3. In 1983/84, total expenditures on transport by all levels of government - federal, provincial and municipal - were just under $8 billion. A substantial part of this sum is not recovered in user charges. The federal government is already reducing its subsidy commitment to transport; action has been taken recently to reduce VIA Rail subsidies and to lease the management of major airports to private interests. The extent to which highway infrastructure for the motor carrier industry is subsidized by government and other users is currently a high profile issue, but beyond the terms of reference of this study.

4. Government purchases of capital equipment and materials have the capacity to influence the location of industry. In 1987-88, federal government purchases amounted to some $9.6 billion and purchases by the province of Manitoba to about $700 million. The Manitoba share of federal government procurement was 3.5%; although this was not too far below our 4.1% share of population, 1987-88 was a better than average year for the province, with large contracts in the Manitoba aerospace industry.

5. The taxation burden, both personal and corporate, is on the high side in Manitoba compared with the other western provinces, although Ontario is ceasing to be any more attractive than Manitoba. In corporate taxation, the major complaint relates to the payroll tax. The railways also have strong objection to the tax on locomotive fuel. The low taxation mecca to Manitobans is clearly Alberta and the level of taxation is indeed much lower in that province. In terms of municipal taxation, Winnipeg ranks fourth highest amongst thirteen large Canadian cities in terms of property taxes for similar accommodation. House prices may be low in Winnipeg, but property taxes are not.

The present chapter has dealt with matters which affect the development of transportation, but have policy implications far beyond the mandate of the Manitoba Transportation Action Plan. Consequently, no recommendations are made on the transport policy framework, the Western Grain Transportation Act, or subsidy policy. Several policy matters have already been dealt with elsewhere in the study and consequently the list of recommendations below is of modest length.

The federal government should:

(a) ensure that federal procurement expenditures have maximum impact on the development of the transport service and transport equipment manufacturing industries in Manitoba.

2. The provincial government should:

(a) bring provincial needs forcefully to the attention of the federal government so that procurement expenditures by all levels of government have the maximum impact on the transport service and transport equipment manufacturing industries of Manitoba;

(b) make sure that Manitoba is tax competitive with competing jurisdictions and, as soon as possible, eliminate the payroll tax.

CHAPTER 11: THE MANITOBA ECONOMY IN THE YEAR 2000

Part 1 of this study reviewed the current state of the Manitoba economy, the transport service industries, transport equipment manufacturing, transport users and transport policy issues. This was not a static examination, as problems were identified, prospects and concerns considered, and recommendations made. Specific developments which have taken place recently, are in process or can be anticipated over the next decade are now reviewed. Chapter 11 examines the Manitoba economy, with the three subsequent chapters focusing on regulatory change, technological developments in transport, and other factors which will impact on transport. Chapter 15 addresses the Manitoba transportation scene in the year 2000; targets are identified and objectives are specified in order to achieve these targets.

The format of the discussion of the Manitoba economy in the year 2000 follows that used in Chapter 1 on the current state of the Manitoba economy. Section 1 focuses on leading economic indicators and section 2 on the sources of gross provincial product. Dr. Norman E. Cameron of the Department of Economics, University of Manitoba, has been the general consultant to the study on economic trends in the province. Sections 1 and 2 of the present chapter draw very heavily on the paper he provided to forecast future developments.

Section 3 summarizes the chapter and the implications for the study of the Manitoba Transportation Action Plan to the Year 2000. The discussion of earlier planning exercises in the Manitoba economy and the major transportation developments of the last decade are not repeated from Chapter 1.

11.1 LEADING ECONOMIC INDICATORS

This section provides a look ahead to the year 2000 for the leading economic indicators of the Manitoba economy, which were examined in the first section of Chapter 1. The issue of "quality of life", addressed in Chapter 1, is not re-examined.

11.1.1 Population, Employment and Unemployment

Population growth comes from three sources: natural increase, net interprovincial migration, and net international immigration.

Natural increase reflects what happens to the birth rate and to the death rate. Each is likely to change significantly over the period to the year 2000. Death rates will fall as the result of rising life expectancies, with better health care and more healthy lifestyles. On the other hand, relatively more people will be in the older age groups, where mortality rates are higher than for the population on a whole. Interpolating from Statistics Canada estimates, the net effect for the population as a whole will be to increase the crude death rate in the 1990s. The range of death rates, which has stayed between 8 and 9 per 1,000 of population in the recent past, can be expected to average between 9 and 10 per 1,000 over the next decade.

The birth rate will decline because of population aging, with fewer people of child-bearing age. Birth rates will also decline if past trends to lower desired family size continue. Statistics Canada estimates that birth rates will be 5% lower than at present in the 1990s. The range of birth rates in the recent past has been from 16 to 18 per 1,000 of population. At 5% lower, the range would be 15 to 17 per 1,000.

The range of natural increase expected over the years to 2000 is obtained by taking the lower birth rate estimate and subtracting the higher death rate estimate (15-10=5) and by taking the higher birth rate estimate and subtracting the lower death rate estimate (17-9=8). The rate of natural increase of population will therefore be in the range of 5 to 8 per 1,000 over the period to the year 2000.

Net international immigration will reflect Manitoba's share of Canadian net immigration. Manitoba's share in recent years has been 7% and this figure is also used for the future. Manitoba has received a disproportionate share of immigrants and is likely to continue to do so. Moderate costs of living are a powerful inducement, as is the large stock of recent immigrants who provide connections to would-be immigrants still abroad.

Net immigration to Canada to the end of the century is predicted by Statistics Canada at a low estimate of 50,000 per year and a high estimate of 100,000 per year. The mid-point of 75,000 is taken as the best estimate. Current immigration legislation sounds more restrictive than previous practice, but there are also more vigorous efforts by would-be immigrants to enter Canada. The net effect is likely to be a continuation of current immigration levels. If Manitoba's 7% share of this net immigration continues, the annual inflow would be 5,250 persons per annum on the "best estimate" of Canadian net immigration, within a range of 3,500 to 7,000.

Net interprovincial migration flows are an important source of uncertainty about future provincial population levels, as these can vary considerably from year to year. In the years from 1973 to 1989, the average net flow for Manitoba has been negative, at just over 0.4% per year. This may not continue at such a high rate. The net migration of people off the farms will be at a slower pace than in the last twenty years because the remaining stock of people is now so much smaller. The "best estimate" for net interprovincial migration flows for Manitoba is taken as minus 0.3% on average over the eleven years to 2000, equivalent to 3,250 people per annum. A low estimate is one standard deviation below that average, which is a net out migration of 0.7% per year or 7,600 per annum. A high estimate is a net inflow of 0.1% per annum, equivalent to 1,000 people a year.

Combining all three sources of population growth gives the range of population forecasts for 2000 shown below.

Table 11.1: Manitoba Population Estimates for the Year 2000

	thousands		
	Low	Best	High
1989 population	1,084	1,084	1,084
Natural increase	55	72	88
Net interprov. migration	-84	-36	12
Net immigration	39	58	77
Population in 2000	1,094	1,178	1,261
Annual % change	0.08%	0.76%	1.38%

The "best estimate" is the June 1989 population of 1,084,000 plus 72,000 of natural increase and 58,000 of net immigration, less 36,000 net interprovincial migration loss, for a total of 1,178,000. This represents a population growth of 0.76% per year, which is roughly comparable to the figure of 0.69% recorded in 1981-89. Low and high estimates are derived similarly. Manitoba's share of total Canadian population was 4.1% at June 1, 1989. On the "best estimate" for June 1, 2000, it will be 3.9% by the end of the century.

The age distribution of the Manitoba population will move more or less as the national age distribution. There will be some marginal effect from Manitoba having more than its share of net immigration, which has a different age mix than average for the population, but the impact will be small.

In 1988, the 65+ age-group contained 12.9% of Manitoba's population as against 11.1% for Canada. By the year 2000, Statistics Canada estimates that 12.7% of the Canadian population will be aged 65 and over. Presuming that the Manitoba differential still holds, the 65+ age-group would account for 14.5% of provincial population in the year 2000. The aging of the population will bring increased transportation needs for the aged, both handicapped and non-handicapped. Nevertheless, the increase in the population aged 65 and over will be fairly modest to the year 2000; fertility was low in the 1930s and this reduces the numbers of retirees. Even on the doubtful assumption that earlier retirement patterns will continue, mass retirements from the post - World War II baby boom will not have their major demographic effect before the turn of the century.

Any forecast of the old age dependency ratio should be reasonably accurate, because all of the individuals involved are already born and likely to be already living in the province today; the 0-14 age-group is much harder to forecast because few of them are born yet. Statistics Canada has produced forecasts for the year 2000 of the proportion of population in the 0-14 age group; the mean of these forecasts is for a 2.5 percentage point drop from the 1988 figure. Applying this to the Manitoba 1988 figure of 22.0%, only 19.5% of Manitoba's population would be in the 0-14 age-group by the year 2000.

The working age-group is officially defined as the population aged 15-64, although this lower age limit has become increasingly inappropriate in recent years. The net result of a declining share of younger age groups and rising share of older age groups is that the working age group can either rise or fall. In 1988, 65.1% of the population of Manitoba was in the working age-group. With young people in the age-group 0-14 likely to fall faster than the rise in the 65+ age-group, the proportion of population in the working age-group would increase to 66.0% by the year 2000. However, given the frailty of demographic forecasting, no great change in the proportion of population in the working age-group is the safest expectation.

As for distribution of total population between parts of Manitoba, Winnipeg is likely to continue to attract the lion's share of population growth. Southern Manitoba towns like Brandon, Steinbach, Morden, Winkler and Altona, will continue to grow with both rural-urban migration and net immigration to the province, but Winnipeg will continue to attract most of that shift. Only large-scale northern hydro and mining projects will cause deviations from this pattern.

Employment patterns will reflect output patterns, but with modifications because of different rates of productivity growth. Table 11.2 shows employment in each sector in 1988, and low, best, and high estimates for 2000. These estimates need only be approximate for purposes of the present study and detailed forecasts for the transportation industry will be given in Chapter 15.

Table 11.2: Sector Shares of Manitoba Employment - %

	1988	2000		
		Low	Best	High
Agriculture	7.5	4.0	5.0	6.0
Mining and Other Primary	2.0	1.5	2.0	2.5
Utilities	1.2	0.6	1.0	1.2
Manufacturing	12.8	8.2	10.1	11.6
Construction	4.7	4.0	4.7	5.5
Transportation and Communication	8.5	6.0	7.0	8.0
Trade	17.6	18.5	19.0	20.0
All Other Services	37.8	40.2	43.1	46.0
Public Administration	7.9	7.5	8.1	9.0
Total	100.0		100.0	

Note: The columns of low and high estimates for the year 2000 do not add to 100.

Source: 1988 data from Manitoba Department of Finance, "Manitoba Economic Statistics", June 1989, p.7.

Generally, sectors that have been declining in share of total employment are forecast to continue to decline, though more slowly. Sectors that have been generating relatively more employment are forecast to continue doing so, though more slowly. Agricultural employment has been declining in relative importance in Manitoba for many decades; the extent of what has already taken place limits the size of future decline. Manufacturing is forecast to drop only a further 2.7 percentage points by 2000. The effect of opening up U.S. markets in the Canada-United States Trade Agreement is most of the reason for the smallness of this decline, together with a slowing of productivity growth. The share of mining is forecast to stay steady. Exhaustion of the more easily accessible deposits means decreasing productivity in mining, therefore greater employment per ton produced. No such decrease in productivity is in store for the utilities sector and employment may therefore drop slightly. The construction sector will continue to be cyclical, reflecting the state of capacity use in other parts of the economy.

The transportation sector's share of employment will continue to fall, but communication employment may rise, despite rapid technological innovation, because of an ever-increasing range of types of communication. Growth in the volume of trade reflects higher income levels and servicing customers will remain labour intensive.

Because of problems in reconciling employment data with figures of gross provincial product, Table 11.2 shows a large "all other services group" with 37.8% of total Manitoba employment in 1988. This disparate group consists of finance, insurance, real estate, business and personal services, health and welfare and education. This is a growing sector of the economy. New forms of financial service are being invented each year to bring more sophisticated financial options down to the level of the retail customer. Business and personal services have grown beyond anyone's expectations in the last few decades and more growth is forecast. Many types of service are "luxuries" on which a larger share of income is spent as income rises. In addition, labour productivity has not grown as rapidly in the service industries as in the goods-producing industries and this has further boosted employment in services. Finally, there is public administration, also a growth sector, but with only modest increase forecast for the year 2000.

Unemployment rates are currently high, even though capacity utilization rates are also high for many sectors. Unemployment is partly cyclical and will remain so. There have been no institutional changes in the Canadian economy to eliminate or even reduce the kind of cyclical swings we have had since 1945, so they are to be expected to continue for the next decade. The range of likely unemployment rates in 2000 will therefore be similar to that from 1981 to date, between 9.4% and 5.9%. Slower labour force growth because of demographic shifts will tend to lower the unemployment rate, so that this is forecast at 7.0% or even less, as against the 1988 figure of 7.8% for both Manitoba and Canada.

The labour force participation rate is defined as the percentage of population aged 15 and over who are members of the workforce, employed and unemployed together. Greater female employment is pushing up the overall participation rate, but a greater proportion of older, retired people is pushing down the rate. So far, the greater female employment has been the dominant force and the overall participation rate continues to rise.

If real wages do not resume their past upward trend, stalled since 1981, participation rates may rise even faster as families try to maintain some growth in family real income. National and provincial daycare policies would speed the process of shifting more and more women to work outside the home. It has been suggested by researchers that the process will end only when the female participation rate equals that for males of the same age - with the exception of time out for childbearing and a few years of child rearing. The current female participation rate of 59% in Manitoba is slightly higher than for Canada as a whole, but it still has a long way to rise to meet the male rate of 78%. For both sexes together, the current participation rate in Manitoba is 68% and this should reach 70% by the year 2000.

11.1.2 Prices and Wage Levels

Short-term prospects for wage and price inflation point to continuation of the 5% rates we have maintained in Canada since 1984. Inflationary pressures continue, though capacity utilization levels have declined in the last year. It seems unlikely that inflation will decline much with the modest growth slowdown being forecast. It is also implausible that the central bank will allow much acceleration of inflation. If the General Sales Tax takes effect in January 1991, this will cause Consumer Price Index inflation to jump into the 7% range, but this will be a step change rather than a trend. For the 1990s as a whole, we should expect a continuation of 5% inflation as the best estimate, with wages rising roughly at the same rate.

These increases in the annual inflation rate may seem modest, but they have cumulative effects on such things as the real value of fixed-nominal-value assets and debts. By the year 2000 the real value of a $100 bill in 1989 will fall by 43% at a 5% annual rate of inflation. Many other nominal adjustments follow from the inflation estimates presented above. For instance, higher inflation is accompanied by higher nominal interest rates (though usually lower real interest rates and significantly lower real, after-tax interest rates).

Within Canada, there is no reason to suppose that Winnipeg's low cost of living advantage, relative to other Canadian cities, will have disappeared by the year 2000. Rapid expansion of the city would have that effect, as it did for Calgary in the 1970s, but this is unlikely in Winnipeg. In July/September, 1989, average weekly earnings in Manitoba were 8.5% below the Canadian average. A differential of roughly this extent has existed for many decades and there is no reason to think that this will disappear.

11.1.3 Tax Rates and Burdens

Tax rates will be somewhat higher by the year 2000 and also covering a broader range of goods and services. Current deficit levels are not sustainable to the year 2000: they would cause the federal debt to become too high relative to gross domestic product (GDP). The federal deficit has ballooned into the $30 billion range with higher short-term interest rates; maintaining existing federal spending programs will require tax revenue increases or expenditure reductions of about $10 billion to keep the debt-to-income ratio from rising further. The deficit would then grow at the same rate as nominal GDP, about 6% per annum currently.

The high estimate of marginal tax rate changes is that they will rise 10% on average; all of the deficit reduction would be achieved by tax increases. The low estimate is a rise of 5%; the rest of the needed deficit reduction would be raised by a combination of spending reductions, base-broadening, and continued deficits above the equivalent of $20 billion. The best estimate by the year 2000 is that, with base broadening, all of the extra needed revenue will be raised with tax rate increases of about 7%.

As shown earlier in this study, Manitoba's tax rates have been relatively high compared with Ontario and the rest of Western Canada. This disparity has been somewhat modified over the last year by tax increases in Ontario and tax decreases in Manitoba. The general future of taxation in Manitoba is, of course, far beyond the terms of reference of this present transportation study.

11.2 SOURCES OF GROSS PROVINCIAL PRODUCT

Manitoba's output picture is best thought of not in terms of gross figures, but in terms of output shares. These are given for 1988 in Table 11.3, together with forecasts for the year 2000.

Table 11.3: Manitoba Output Shares -%

	1988	2000		
		Low	Best	High
Primary	13.2	11.4	11.9	12.4
Manufacturing	10.3	9.3	9.8	10.3
Construction	6.8	5.3	6.3	7.3
Services	69.8	71.5	72.0	72.5
Total	100.0		100.0	

Note: The columns of low and high estimates for the year 2000 do not add to 100.

The share of primary resources will continue to decline, from 13.2% to 11.9% of total output. Agriculture will continue its long-term decline in relative importance. Shortages of raw industrial materials may improve mining prospects, but not by enough to make up for agriculture's decline. Low and high estimates are half a percentage point away from the best estimate above. Swings in primary product prices such as we have experienced in 1987-89 can make a large difference to mineral output. Manufacturing could benefit from the Free Trade Agreement and this could reduce its rate of decline in share of net output.

Services in total should grow to about 72% of net output. The sectors most affected will be Finance-Insurance-Real Estate and Community-Business-Personal Services. Transport and Communication will be changing rapidly to the year 2000, but the rapid rate of technical progress in this field means that falling costs offset the effect of increased production in augmenting the value of output. The final sector is construction. As the residual, the best estimate of its share of total output must fall slightly to 6.3%.

There is nothing in the projected changes in output share which will cause Manitoba's total output volatility to change significantly compared to its neighbour provinces. The relative decline of its primary resource sector will make Manitoba more stable rather than less. On the other hand, greater specialization of output by individual manufacturers to take advantage of the free trade arrangements, and possibly reduced room for fiscal manoeuvre by governments with stabilization policy, may both increase volatility of aggregate spending for Manitoba.

Output and income distribution by area within the province will not change significantly by 2000. Computer technology allows many services to be performed outside major urban centres, but Winnipeg is not yet big enough to suffer the major congestion problems which drive service producers out of cities. Winnipeg has the urban convenience without the urban problems of places like New York, Los Angeles, or even Toronto. Transportation nodes and economies of scale will continue to make Winnipeg the growth pole of the Manitoba economy.

Aggregate demand will remain volatile until the year 2000 and investment spending will account for most of the volatility. The current share of investment in gross provincial product is high because of current needs for capacity expansion at the end of a long boom. Booms are usually followed by slumps, during which investment spending drops quickly. Over the period to 2000, adjustment to the Canada-United States Trade Agreement will cause more capacity expansion than is usual, so investment spending should account for more of total spending than on average over the last few decades. An average share of 20.8% of gross provincial product is plausible. A margin of plus or minus 3.4 percentage points is used for high and low estimates, where 3.4 percentage points is the standard deviation of this share over the period from 1969 to 1986.

The share of government spending will remain high, despite the province's debt load constraint. The Manitoba Government is providing many of the services which are in increasing demand, so taxpayers may be willing to suffer some increases in taxes above today's rates in exchange for the extra services, for example health care. The best estimate is therefore continuation of the Manitoba Government's 21% share of gross provincial product. A margin of plus or minus 1.6 percentage points is used for high and low estimates, where 1.6% is the standard deviation of this share over the period from 1969 to 1986.

It seems likely that the Manitoba Government, like other provincial governments, will further develop its ability to adjust its spending to counter exogenous shocks from investment spending or export spending. If so, then total spending will be somewhat less volatile in the future than over the last three decades. On the other hand, it seems likely that the federal government will be so constrained by its rising debt problem as to be able to offer little help in offsetting other shocks to spending. The net effect of both developments will be very small.

11.3 SUMMARY

The purpose of this chapter was to survey likely developments in the Manitoba economy over the next decade as background to the formulation of the Manitoba Transportation Action Plan. Obviously this chapter does not call for recommendations, as the present study is dealing with transportation and not with the Manitoba economy as a whole.

The Manitoba economy in 1989 was summarized in the final section of Chapter 1. In terms of population and employment, Manitoba has advanced less rapidly than Canada as a whole. Wages and salaries are below the national average, but this is substantially offset by a lower cost of living and by transfer payments supplementing the level of personal income per head. Tax rates tend to be somewhat higher than in other provinces and gross domestic product rests more on the service industries - transport, trade and financial services - than in Canada as a whole. Quality of life, for what this subjective concept is worth, suggested that Winnipeg was about three-quarters down the list of large metropolitan centres in Canada. Yet, there seems to be a non-alarmist acceptance of performance slightly below average on all major economic indicators. In part, this reflects the fact that the superior performance of Canada as a whole has been confined to the provinces of Ontario, British Columbia and Alberta. Manitoba has fared as well or better than Quebec and Saskatchewan and much better than the four Atlantic Provinces.

It would be repetitive to give a detailed summary of the forecasts of developments in Manitoba to the year 2000 as these can be broadly described as "much the same as in the last two decades", compared with Canada as a whole. The province does not change rapidly and this has both advantages and disadvantages. Compared with the experience of recent years, patterns of income, prices, unemployment, population growth and the gradual drift of population to Winnipeg are unlikely to change. Agricultural employment will continue to decline, but manufacturing employment should not be under much pressure and employment in mining is more likely to increase than fall. The service sector, already responsible for 70% of Manitoba's gross provincial product, will continue to increase in its share of total output along with the rest of Canada - and for that matter the whole western world. The proportion of population in the older age-groups will increase, but not at a rapid rate over the next decade.

The overall forecast of the Manitoba economy to the year 2000 is best described as continuation of present trends and perhaps this is a little unexciting. However, there is nothing to suggest that this forecast is inaccurate or unrealistic. Admittedly, the pace of change is always simultaneously both faster and slower than one might expect and this idea has already been developed elsewhere in the present study, particularly in Chapter 1. Nevertheless, in the absence of evidence to the contrary, a continuation of present economic trends to the year 2000 must be the underlying assumption to the projections for the transport service and transport equipment manufacturing industries in this study.

CHAPTER 12 TRANSPORT REGULATORY CHANGE

This chapter deals with the effects of government regulation of transport on transport carriers and users of transport services. The chapter covers direct economic regulation, which consists mainly of controls on rates, entry and exit and common carrier obligations; indirect economic regulation relating mainly to restrictions on the dimensions and weights of trucks; and safety regulation, which usually has economic repercussions.

The chapter starts with a brief consideration of the rationale for regulation of the transport industries. Three transport modes - air, highway and rail - are reviewed by summarizing the major regulatory changes which came into effect on January 1, 1988, the probable results of these changes, and the likely thrust of future transport regulation. The discussion does not cover the water mode. The fifth section speculates on further regulatory change to the year 2000.

12.1 THE RATIONALE FOR TRANSPORT REGULATION

It is not the intention to review at length the history of transport regulation in Canada and the reasons advanced over the years to justify or refute the need for such regulation. However, it is useful to start with a brief summary of the arguments for and against transport regulation by government as they apply today in order to set the stage for the discussion of recent and prospective regulatory change.

In terms of economic theory, optimal results are achieved by reliance on competition in markets where there are a multitude of buyers and sellers and where each individual buyer or seller has little ability to influence price or market conditions. In addition, the operation of the market must not cause external social costs or external social benefits to third parties who are not part of the market process. Unfortunately, these ideal conditions prevail more in economics text books than in the real world.

In the specific area of transport, there are often very few carriers operating in any individual market and government regulation of transport may be used to protect the users of transport services. Transport operations have repercussions on third parties in terms of social costs and social benefits. These social costs are generally tangible, for example noise pollution, and economic regulation is one of several possible means of dealing with this problem. The social benefits from transport have been identified in terms of national unity, regional economic development and income redistribution and these have often been advanced as reasons for government regulation.

An appreciable proportion of the costs of transport carriers are fixed as distinct from varying with traffic - although this is less true today than in earlier times - and government regulation is justified as protecting carriers from the vagaries of the market place and increasing stability in the provision of transport services. Finally, there is the argument that, left to their own devices, carriers might pursue an inadequate level of transport safety; this is the reason for government regulation of safety.

The case for transport regulation in Canada rests today on alleged needs to protect the shipper, the passenger, the carrier, the public interest, regional development and national unity. The opponents of regulation question whether these objectives can be achieved and instead prefer to rely on market forces. This is summarized succinctly in the first page of the preface to the 1985 publication "Freedom to Move" where the then Minister of Transport, the Hon. Don Mazankowski, stated that he had "been guided in particular by the following principles:

(a) Less regulation, leading to less government interference, will encourage innovation and enterprise;

(b) Greater reliance on competition and market forces will result in lower unit costs, more competitive prices, and a wider range of services to shippers and the public;

(c) Canadians require a regulatory process that is open, accessible, and not excessively costly or time consuming."

Mr. Mazankowski commented that "In the environment of the 1980s, the existing regulatory regime represents an obstacle to economic growth, innovation and competitiveness". In respect of safety, he stated that he "would like to indicate unequivocally that the Government will neither propose nor permit any regulatory reform that might be detrimental to safety standards.

The regulatory changes in Canada of 1987 were, of course, partly inspired by the major deregulatory thrust which had taken place in the United States at the beginning of the decade. Yet, it is misleading to consider that Canadian transport was universally under the heavy hand of rigid regulation before the 1987 National Transportation Act. Prior to the Carter administration in the United States and the legislation culminating in the Staggers Act of 1980, transport was much less regulated in Canada than in the United States. The 1967 National Transportation Act had freed the Canadian railways from rate regulation and given them compensation for publicly imposed duties, particularly in respect of uneconomic passenger services and uneconomic branch lines. For some thirteen years thereafter, the flexibility of railway regulation in Canada was the envy of the United States.

Although truck regulation was stringent in many of the provincial jurisdictions in Canada, the situation prior to 1980 was no worse than south of the border. When the airline industry was regulated in the United States, this was probably more restrictive than in Canada. With the extinction of the Civil Aeronautics Board under a sunset clause in 1981, regulation of domestic air services in the United States virtually disappeared. However, under the example of U.S. experience and the competition that ensued, government control over fares, entry and exit had been greatly relaxed in respect of

Canadian domestic air transport by 1984 and there had been some relaxation of regulation of fares on international routes.

Greater reliance on competition and market forces had been the inspiration of the 1967 National Transportation Act and the results were very real in terms of greater pricing flexibility for the railways, although this Act had minimal affect on highway and air transport. The wind of change from the United States was affecting Canadian transport from the beginning of the present decade and this was also in the direction of greater reliance on market forces. The principles adopted as the inspiration for the 1987 National Transportation Act did not therefore constitute a departure from previous modes of thought or a quantum change in policy, but rather a continuation in the direction which had already been established.

The National Transportation Act of 1987 took effect on January 1, 1988 and the provisions have been summarized in informational brochures issued by the new National Transportation Agency (NTA). These brochures include a brief philosophical statement of objectives and it is useful to quote, as an example, the first paragraph of the brochure on air transport. This summarizes the objectives of the legislation against which performance will be judged under the statutory requirement for annual reports to Parliament and the in-depth review scheduled for 1992.

> The new National Transportation Act reflects the principle of less regulation to encourage innovation and enterprise. This greater reliance on competition and market forces will improve service to both shippers and the public. The new Act also provides for a new, more open and efficient regulatory process.

12.2 AIR TRANSPORT

The 1987 National Transportation Act effectively deregulated air transport in southern Canada. This gave legislative confirmation to changes which had already occurred three years earlier, resulting from the fall-out from deregulation in the United States. The 1987 Act retained a degree of regulation for air service to northern and remote areas, but the degree of regulation of these services had been reduced prior to the new legislation and this continues. Apparently, no applicant for a scheduled air service to northern or remote areas has been refused for at least two years. International air services were not affected by the new legislation. The changes in each sector of the air industry are now considered in turn.

Domestic air service in southern Canada is subject to very little regulation. Provided that the carrier is of Canadian nationality, there is freedom of entry on demonstration that the carrier is "fit, willing and able to provide the service". In broad terms, all that this implies is adequate insurance and a safety certificate from Transport Canada. The effects of the entry of a new airline on carriers already serving a route are no longer relevant. Airlines can leave a domestic route with only 120 days advance public notice of their intention. There is no control over rates in southern Canada, confidential contracts are permitted, and air carriers are not required to file tariffs with the regulatory body. However, the NTA will review, on complaint, increases in basic passenger fares on monopoly routes in southern Canada.

Domestic air service to northern and remote communities is still subject to a greater degree of economic regulation because of the so-called "fragile" nature of these markets. As in southern services, the market is reserved for Canadian carriers. The previous requirement for entry to air service in northern and remote areas was based on a test of "public convenience and necessity". Under the new legislation, the NTA must be satisfied that the new service will not "significantly decrease or destabilize existing air services in the area". The NTA may still subject licences to conditions related to such matters as the type of service, the size of aircraft and the points served.

The discontinuance rules for northern and remote air services are the same as for southern domestic services, namely 120 days advance public notice. Pricing regulations have been relaxed, but not to the same extent as in southern services. The NTA may still hear complaints about unreasonable passenger fare levels or increases and can order fare reductions and the refund of excess charges. Finally, in respect of air services to northern and remote communities, it is stated that no community will be left without essential air services as a result of the new air policy and that subsidy will be provided where necessary.

The regulation of international air services remains unchanged under the new legislation. Market entry and exit are still controlled through bilateral negotiations between Canada and foreign countries. Air fares are still subject to regulatory approval; for example, in September 1988, the NTA demonstrated that these powers could be exercised by ordering Air Canada to reduce basic passenger fares on Trans Atlantic services.

Conditions in air transport have changed very substantially in the 1980s, even if much of this change preceded the passing of the 1987 legislation. For many years, the structure of air transport in Canada had been two trunk carriers; five regional carriers; Wardair, which was basically an international charter carrier; and a large number of third level carriers, mainly serving northern and remote areas. Under the stimulus of competition, the role of the regional carriers gradually became irrelevant and there is now a duopoly of two mainline carriers, Air Canada and Canadian Airlines International Limited (CAIL), since Wardair has been absorbed by CAIL. The third level carriers are mainly confined to feeder operations in "partnership" with Air Canada or CAIL and service to northern and remote points.

With the disappearance of Wardair, together with the similar experience of People's Express in the United States, the viability prospects for additional mainline air carriers in southern Canada are not promising. There are now two carriers and conditions of competitive duopoly are unstable. There is always the danger of competitors becoming more obliging to each other in terms of limiting competition on fares and service. Duopoly can be innovative, but there is no guarantee that it will result in "lower unit costs, more competitive prices, and a wider range of services", as expected from the previous quotation from "Freedom to Move". In fact, if each mainline carrier were still operating on the declining part of its cost curve, duopoly could be more expensive than monopoly. The economic pressure would be towards merger and monopoly, not competition.

Air regulation in Canada has, in many ways, been a dismal story for well over two decades. The attempt to find a role for regional airlines ultimately failed, as indeed was inevitable. The regulator is now faced with a duopoly and, even if the regulatory agency had control over rates and conditions of entry, it would be difficult to cope with a situation where there are only two carriers. The NTA is bereft of powers to deal with the situation emerging in mainline southern Canadian air services - yet, the new legislation had little choice other than to confirm the developments of the three previous years which had removed an intolerable burden on the air industry.

There are no obvious solutions to the problem of how to make a duopoly behave without exercising its oligopolistic power. A number of scenarios are possible. Firstly, Canada could continue with a duopoly for the next decade relying on restraint by the duopolists in the exercise of their power, as the regulatory agency has no means of control. This is quite a likely solution, given the long experience of duopoly in rail transport, and perhaps not much worse than the attempts to regulate air transport over the last two decades.

Secondly, there could be a merger of the two duopolists into one enterprise, either owned privately or publicly. In theory, this could produce lower cost air transport if there are increasing returns to scale in mainline southern Canadian air services, but the price would be the development of inefficiencies inherent in any monopoly. This scenario is unlikely to unfold.

Thirdly, although transport is presently excluded from the Canada-United States Trade Agreement, new developments over the next decade could lead to a greater integration of the Canadian and U.S. air markets, with Air Canada and CAIL competing with the six carrier conglomerates which dominate U.S. air transport. This is a possible scenario.

In any event, regardless of the outcome, the NTA is likely to be an observer rather than a controller; moreover, it is not clear how this situation can be redressed by further regulatory change. Anti-trust legislation is an alternative to regulation, but past history is not encouraging here. This is a public policy issue for which there is no obvious solution.

As already indicated, economic regulation over air services to the north and remote points still continues, but the regulation has been operated very loosely over at least the last two years. This has increased competition and the effects on these so-called "fragile" markets remains to be seen. There is also the safety issue in respect of northern air transport, as small aircraft flying in isolated areas are inherently less safe than the larger aircraft operating in southern Canada. This was examined at some length in 1988 by the Consumers' Association of Canada. In view of the sparse traffic generated by northern and remote communities, there could be a return to more restrictive regulation of these markets and the regulatory tools are, of course, still available.

Although air transport is not part of the Canada-United States Trade Agreement, pressure may grow over the next decade to allow greater competition between U.S. and Canadian carriers on transborder flights and greater pressure to integrate the U.S. and Canadian air markets. This would spill over into international flights, with an even greater use of U.S. exit points for international flights by Canadian travellers. Major Canadian cities would be in danger of becoming spokes to U.S. air hubs, but it is difficult to see what measures a regulatory agency could take to influence this.

12.3 HIGHWAY TRANSPORT

Part IV of the 1987 National Transportation Act relates to motor vehicle transport, but this covers only transport which is exempt from the Motor Vehicle Transport Act. As there are very few exemptions from this legislation, effectively it is the Motor Vehicle Transport Act of 1987 which contains the changed government approach to regulation of highway transport.

Federal jurisdiction of motor vehicle carriers is confined to extraprovincial carriers, which carry freight or passengers across a provincial boundary or across an international boundary. Highway carriers operating solely within a province are regulated by the province and the federal government has given similar authority to the provinces for the intraprovincial operations of extraprovincial carriers. The new Act makes no change here and no changes to the bus industry, so that the new legislation relates solely to the extraprovincial operations of motor carriers. Federal authority on these extraprovincial carriers was delegated to the provinces as long ago as 1954. The Motor Vehicle Transport Act of 1987 continues this delegation of authority, but with different rules covering how the provinces can use the authority.

There is no regulation of rates or exit from extraprovincial trucking and the regulation therefore covers only conditions for entry. Prior to the new legislation, the market entry test for extraprovincial trucking was on the basis of "public convenience and necessity". This has been replaced by a "fitness" entry test and a "reverse onus" public interest test. The "fitness" test simply relates to insurance coverage and compliance with transport safety regulations.

Under the "reverse onus" test, all new fit applicants will be granted a licence unless an opponent of the application can demonstrate that the granting of the licence would not be in the public interest. This is designed as an interim measure scheduled to expire on January 1, 1993, after which time the "fitness" criterion will become the sole standard. However, there is opportunity for review of the operation of the "reverse onus" test in 1991 and the transition period could be extended.

Accompanying this liberalization of entry into extraprovincial trucking, there have been the development of a National Safety Code for Commercial Trucks and Buses and relaxation in highway limits on truck weights and dimensions. The National Safety Code covers all aspects of driver and vehicle safety including driver licence requirements, hours of service worked by drivers, the compilation of daily log books, vehicle maintenance standards, daily trip reporting of defective equipment, roadside inspections and safety audits of carrier operations. The Code has built on existing safety standards with additions in key areas, mainly hours of service and record keeping. The principal objective has been stated as national safety uniformity on the basis of nationally approved standards. Implementation requires legislative and regulatory action by the federal, provincial and territorial governments. Many standards are already in place and full implementation is well underway.

In terms of truck weights and dimensions, there has been a long term trend of relaxation of the limits allowed on Canadian highways and this has greatly increased the efficiency of the trucking industry. The problems with increasing motor vehicle weights and dimensions lie in two areas - the stress on highway infrastructure and the interaction with other traffic, particularly in respect of safety and vehicle delays. Although attempts have been made to measure these factors, a comprehensive framework for analysis still does not exist. It is therefore not surprising to find that different provincial jurisdictions have considerable variation in their weight and dimension restrictions and this extends to different regulations for different roads, different seasons and the issuance of special permits.

On February 12, 1988 a memorandum of understanding was signed between the federal and provincial ministers of transport to approve standardization of weights and dimensions for heavy trucks used in interprovincial traffic. In this agreement, an effort was made to secure gains in efficiency and productivity, without prejudicing highway infrastructure and standards of safety.

The standards are summarized below:

- height, including load, must not exceed 4.15 metres;
- width, including load, but excluding mirrors, lamps and securing devices must not exceed 2.6 metres;
- length, including tractor, must not exceed 23 metres, with the maximum permissible semi-trailer length at 14.65 metres;
- tridem axles must comply with national standards, with weight and capacity incentives to encourage the most stable configurations;
- maximum gross vehicle weights will be 46,500 kg for semi-trailers, 53,500 kg for A train and C train configurations, and 62,500 kg for B train configurations.

Ease of entry into the trucking business allowed under the new Motor Vehicle Transport Act has therefore been reinforced by more uniform weight and dimension limits on trucks and increased safety requirements through the new National Safety Code. The competitiveness of the truck vis-a-vis rail has increased over the years, partly as a result of technological developments and partly as a result of more generous limits on weights and dimensions. These trends are likely to continue.

Compared with other transport modes, the trucking industry in Canada is still dominated by small firms. In 1986, the ten largest companies accounted for only 19.3% of total trucking operating expenses (SC 53-222, p. 18). Later figures have not been published, but this concentration is growing with, for example, the 1988 demise of Route Canada and the acquisition of Kingsway by Canadian Motorways. Nevertheless, there may still be enough companies in the trucking industry to rely on competition and market forces to "result in lower unit costs, more competitive prices and a wider range of services to shippers and the public", to quote again the words from "Freedom to Move". The new regulatory climate for extraprovincial trucking should stand the test of time over the next decade, but the outcome will almost certainly be greater concentration in the industry.

The changes from the 1987 legislation do not affect intraprovincial trucking, although this has also been liberalized to some extent. Tariffs prescribed by the Manitoba Motor Transport Board are now maximum tariffs, whereas previously they were also minimum tariffs. Entry to the intraprovincial market has also been made easier for extraprovincial carriers. UMTI has recently released a lengthy report on this sector of the industry and a summary of the findings has already been given in sub-section 1.3 of Chapter 4.

12.4 RAIL TRANSPORT

In respect of the rail mode, the National Transportation Act of 1987 has been regarded very much as "a shipper's Act". The following comment by Richard Lande in the November, 1987, issue of Canadian Transportation & Distribution Management summarizes this reaction:

> Now that Bills C-18 and C-19 have received Royal Assent and will be coming into effect next January, shippers have reason to be optimistic about imminent rate reductions and service improvements.

> Never before in Canada or internationally have such an array of legislative provisions been enacted which provide the users of rail service with enhanced negotiating opportunities and substantive legal recourse designed to offset locational dependence upon a railway.

In order to allow shippers to have access to more than one rail carrier, the new legislation took action along two fronts. In respect of shippers located mainly in urban areas, there are prescribed rates for the transfer of rail cars from one railway to another railway within a prescribed distance of an interchange. The new legislation has extended the limits to which these interswitching arrangements apply from 6.4 kilometres to 30 kilometres. Under the old interswitching limits, the Canadian Manufacturers' Association estimated that 50% of industrial plants in Canada had access to more than one railway through interswitching requirements and that this has now been increased to 80%.

To reduce the captivity of industrial establishments without access to more than one railway, the new legislation introduced competitive line rates. A shipper located on one rail line may ask the railway to establish a competitive line rate for moving goods along the line on which he is captive for interchange to a competing carrier's line. The shipper must have the agreement of the competing carrier before requesting the competitive line rate. If such a rate cannot be satisfactorily negotiated, the shipper may ask the NTA to set a rate according to the guidelines contained in legislation.

However, the competitive line rate arrangement was introduced in the face of extreme opposition from the railways. Firstly, these rates could act as a disincentive to make investments in branch lines to service new resource developments. Secondly, they would give an advantage to U.S. railroads in obtaining traffic from Canada without any similar compensating advantage to Canadian railways.

The new legislation established confidential contracts in the rate area, following the practice introduced in the United States in 1980. Shippers and carriers can make a confidential contract to fit the particular circumstances of movement without having to disclose the rate information. Prior to this, all charges for the movement of freight were in the public domain and effectively any charge negotiated by one shipper was available to other shippers able to offer traffic under similar conditions.

While confidential contracts were necessary to end a competitive advantage held by U.S. shippers and carriers, nevertheless this practice curtails public knowledge of freight rates. In addition railways are no longer required to file other tariffs and agreed charges with the regulatory agency and they are no longer allowed to publish joint tariffs. The downside to these developments is an increased lack of knowledge of freight rates. Markets in which both shippers and carriers do not know the charges levied or paid by their competition are not conducive to an efficient allocation of resources. In particular, it is the smaller shipper who will suffer, partly because the smaller amounts of traffic offered reduce his bargaining position in the market and partly because his ability to obtain information is less than that of the larger shipper.

Mediation services are offered by the NTA to help resolve disputes between shippers and carriers over rates and conditions of service, but this is not a new development. Final offer arbitration introduces a formal way to resolve disputes between shippers and railways. Each party makes a final offer in the arbitration process, the arbitrator selects one of the offers without power to compromise between the positions of the two parties, and the decision is binding. The NTA can also investigate disputes that have a broader impact on the public interest, but this also existed under legislation prior to 1987.

Streamlined rules for branch line abandonment have been introduced, including arrangements for the sale of rail lines to qualified companies who wish to operate short line feeder services. However, the effectiveness of the new rules will be limited over the next few years. Firstly, railway companies may not abandon more than four percent of their total route mileage in any one year prior to 1993. This is a very modest rate of abandonment, given the situation for CP Rail, where 50% of the rail mileage carries only 3% of the traffic, and for CN Rail, where 67% of the rail mileage carries only 10% of the traffic. Secondly, almost all the branch line network in the Prairie Region is still frozen by Order-in-Council until the year 2000.

During the first year of operation of the 1987 National Transportation Act, confidential contracts proved very attractive; over 1,000 contracts were signed in 1988. Only one competitive line rate was implemented in 1988. Branchline abandonment in 1988 was actually less than in 1987, although the rate of abandonment picked up in 1989. The mediation services of the regulatory agency have continued as in previous years, but final offer arbitration has been shunned by both railways and shippers. As Bill Sheffield of Abitibi-Price Inc. remarked at an UMTI conference in December, 1987:

> The new National Transportation Act should not make the new agency power brokers who allocate profits between shippers and carriers. If mediation, final offer arbitration and public interest appeals replace honest, hard headed negotiations, we have failed.

The likelihood of any further major regulatory change in the direction of increased shipper protection is not very great. Firstly, after the three year debate which preceded the National Transportation Act, there will be reluctance to embark on further regulatory initiatives. Secondly, there is concern that the 1987 legislation may have worsened the already weak financial viability of the railways and there would be some hesitation to proceed yet further in this direction. The only major candidate for early change is the Western Grain Transportation Act, already discussed in Chapter 10.

In the area of rail safety, the railways have long complained that they are regulated too closely by government. A new Railway Safety Act became operative on January 1, 1989 and a new multi-modal transportation accident investigation board is now about to become operative. The new Railway Safety Act has removed out-dated regulatory requirements, but only experience under the new Act will show the extent to which the railways have really been freed from regulatory intervention.

12.5 FURTHER REGULATORY CHANGE TO THE YEAR 2000

With the extensive transport regulatory activity of 1987, it is not expected that regulatory change will be a major issue in the Canadian economy before, say, 1994. This statement excludes possible changes to the Western Transportation Act. A general reaction of ennui among the participants in the struggles leading to the 1987 legislation and the statutory requirement for a review of the operations of the new Act in 1992 will probably stop any other activity.

The 1967 National Transportation Act took effect in February that year and the Canadian transportation scene was reasonably quiet for roughly the four years from 1967 to 1970. The railway freight rate issue re-emerged in the west in 1971 and rapidly escalated into the Western Economic Opportunities Conference of 1973. Transport had pride of place at this conference, but very little action resulted. History does not necessarily repeat itself. Nevertheless, the review of the new legislation in 1992 will occur after a time interval from 1988 roughly comparable to the time period which elapsed after 1967 before interest in transport legislation revived. Transport regulation is not likely to become a major issue in the public domain until there has been a period of time to digest the 1992 review.

By the mid-1990s several new considerations will be affecting transport policy. Although the Canada-United States Trade Agreement with the United States excludes transport, this could be temporary if implementation of free trade elsewhere in the economy proceeds smoothly. With a closer integration of the two economies and a possible extension of this to the transport modes, there are obvious repercussions in competition from U.S. trucking companies, U.S. airlines and even U.S. railroads. Environmental issues could be coming back into the political agenda and this could have repercussions on transport, particularly in respect of the externalities of the various modes in terms of fuel consumption, traffic congestion and safety.

Turning to the transport modes themselves, there is already duopoly in transcontinental air services in southern Canada and, if the carriers should cease to compete, this would present a major public policy issue with no obvious solution. The regulatory agency has the tools to deal with air service problems in northern and remote communities and this does not need further comment. The trucking industry should continue to be competitive, but there is the problem of increasing U.S. competition.

In the rail industry, there will presumably still be complaints on rail rates from the resource industries and railway carriers will still show only modest returns on investment. Canada has continued for a very long time with a duopoly in rail service and this could change in the next decade. The shrinking of the railways to core systems and the vast reduction in employment already underway could raise the case for merging the two carriers, either in the public or the private sector.

Transport regulation is a subject much wider than the Manitoba Transportation Action Plan. It is therefore not appropriate to make broad recommendations on transport regulation in the present context. Apart from the Western Grain Transportation Act, the regulatory scene is likely to be inactive until the mid-1990s. As the decade proceeds, new issues will arise from the closer integration of the U.S. and Canadian economies, the possible resurgence of environmental issues in transport, the problem of duopoly in mainline domestic air service, and the progressive reduction of the railways to core systems. However, it is unlikely that the attempts to deal with these problems wiil have significant effects on transportation services and employment in Manitoba before the end of the decade.

CHAPTER 13: TECHNOLOGICAL DEVELOPMENTS IN TRANSPORT

This chapter of the study is based almost entirely on a consultant report prepared for UMTI by R.S. Wallace and Associates Ltd. of Manotick, Ontario and funded by TIDAC. The complete Wallace report runs to some 225 pages and is available for perusal at the UMTI offices. Apart from these introductory remarks and part of the final section, the content below is taken verbatim from the Executive Summary of the Wallace report. As the study was completed in October, 1988, the consultant was asked to review the draft of this chapter and some minor updates have been incorporated.

The transport equipment manufacturing industries of Manitoba have already been reviewed in Chapter 6 and the transport service industries were examined in Chapters 2 to 5. The purpose of the present chapter is twofold. Firstly, it is necessary to consider likely technological developments as a framework for the projections and targets to be developed later in the study for the transport service industries. Secondly, it is necessary to consider the future thrust of technological development in terms of employment potential for the transport equipment manufacturing industries of Manitoba.

The first section of the chapter reviews transport equipment manufacturing in Manitoba. The summary of the industry contained in this section was taken mainly from Chapter 6. The section then discusses the economic impact of transport equipment manufacturing in Manitoba, measuring the direct impacts of the industry and the secondary impacts on suppliers to the industry. Section 2 examines current and anticipated technological change in transport; the long time horizons of change are stressed and specific technological developments are discussed for the air, highway and railway modes.

Section 3 summarizes the potential for manufacturing new transport equipment technologies in Manitoba, addressing the current situation, the conditions for successful development and specific areas in which opportunities can be found. This section is inevitably a brutal condensation of the detailed Wallace study and readers are particularly referred to the main consultant report in this area. The chapter closes with a summary of the basic thrusts of the Wallace study.

13.1 TRANSPORT EQUIPMENT MANUFACTURING IN MANITOBA

13.1.1 Summary of the Industry

In 1989, the transport equipment manufacturing industry in Canada employed 220,000 persons. Almost three-fifths (127,000) of this total were in the automotive sector. Manitoba had 7,000 employees in transport equipment manufacturing. About 800 of these were employed in the automotive sector and Manitoba has therefore only 0.6% of national employment here.

Excluding the automotive sector, Canada had 93,000 persons directly employed in transportation equipment manufacturing in 1989. Manitoba had 6,200 or a 6.7% share of the total. Relative to a 4.1% share of Canadian population, this is a good record. Production in much of the transport equipment manufacturing industry is not highly sensitive to transport costs. Manitoba has positive advantages in respect of its central location and highly motivated labour force.

On 1988 data, Manitoba had transport equipment manufacturing shipments valued at $631 million or 1.3% of the Canadian total; not a large share. However, on the basis of latest published figures for 1986, the value added share of shipments was 56.7% for Manitoba's transport equipment manufacturing industry versus the average of 31.2% for all of Canada; a good performance.

In its aircraft industry, Manitoba is doing very well. Latest official statistics are for 1986, when manufacturing shipments were some 6.2% of the national total in aerospace. With higher value added, Manitoba accounted for 7.8% of national employment in the sector and 56% of its production was exported to other nations.

However, downside statistics lie in motor vehicles and associated parts and accessories. In 1986 Manitoba produced an estimated $50 million of manufactured shipments in this sector. This was negligible against total Canadian shipments of $37.2 billion.

There are two railway rolling stock manufacturers in Manitoba out of a total of 27 firms in Canada. The Manitoba companies are well-established, providing an estimated 5% of that sector's national employment, but this industry is small with little promise of expansion.

An important industry sector in Manitoba is the manufacture of truck and bus bodies, commercial and non-commercial trailers and mobile homes. In 1986, they produced $131 million of shipments representing 10.0% of the national total. As of 1989, Manitoba employment in this sector averaged 1,900.

With the exception of the automobile parts industry, Manitoba is doing well. As a target for the automobile parts sector, Manitoba should strive to reach its 7% average share it holds in the other sectors. Success would generate an additional 8,000 jobs.

13.1.2 Economic Impact

There are three effects the transport equipment manufacturing industry has on Manitoba's economy. They comprise the manufacturer (direct), his suppliers (secondary) and the construction industry that builds and repairs the plant buildings and equipment (secondary). These can be measured in terms of employment and tax revenues for Manitoba and Canada. Some statistics describing these effects are summarized below.

However, the figures are somewhat out-of-date; employment is now 7,000 and, apart from increased manufacturing activities, inflation would also raise dollar figures by 25%.

Manitoba Direct Impacts (1985)

- Wage and salaried employees	6,010
- Wages and Salaries	$ 149 million

Manitoba Secondary Impacts (1985)

- Wage and salaried employees	272
- Wages and Salaries	$ 7 million

For each additional million dollars of new transport equipment produced, say for a newly established industry, the effects on Manitoba are:

- 14.6 new direct plus secondary jobs are created within the Province
- 2.9 additional jobs will be generated outside the Province

In 1985, taxation statistics for the industry were as follows:

Direct Impacts

- Provincial Corporate Tax Revenue	$12.0 million
- Provincial Individual Employee Income Taxes	12.5 million
Total Provincial Tax Revenues	$24.5 million

This is 5.8 percent of the value of goods produced.

- Federal Corporate Tax Revenue	$22.4 million
- Federal Individual Employee Income Taxes	21.4 million
Total Federal Tax Revenue	$43.8 million

This is 10.4 percent of the value of goods produced.

In addition, Manitoba obtained a further $5.5 million in sales taxes, corporate tax revenues and provincial income taxes from secondary impacts of transport equipment manufacturing in supplier and capital construction activities. Federal receipts from these activities were much higher at approximately $24 million.

The above statistics show that expansion in any sector of the transportation equipment manufacturing industry will significantly stimulate Manitoba's economy through increased employment/payroll and tax generation. In 1985, Manitoba received $30 million in taxes from this industry, while the federal government received $68 million. Some of these tax revenues are being used to further support skills training, technology research, and provide assistance to attract new industries. More could effectively be spent.

13.2 CURRENT AND ANTICIPATED TECHNOLOGICAL CHANGE

13.2.1 The Long Time Horizon

In North America (as elsewhere) major vehicle manufacturing requires multi-billion dollar capital investments in plant, equipment, research and staff training. It costs several billion dollars to put a new major commercial aircraft into production. The time from concept to entry into service is typically four or more years. For the new Boeing 757 aircraft, the time was five years to first service in 1982. Every effort is being made to shorten this time cycle of development for all modes. In the North American auto-industry upwards of $100 billion dollars will be spent between now and around the year 2000 to further modernize the industry.

To illustrate the capital and time requirements for a new major vehicle consider the following example. The Boeing 747 aircraft became a commercial design in 1966, after losing a design competition for a military cargo transport aircraft. Its entry into service as a passenger aircraft was in 1967. To August 1987, 809 had been ordered covering four models of the same 747 aircraft. A single Boeing 747-400 aircraft costs approximately $170 million.

The automobile industry is much larger than the aircraft industry. For an average North American annual production of 10 to 12 million vehicles at an average cost of $15,000 each, the sales value is some $150 to $180 billions annually. The development cycle for new models is almost four years.

While very competitive, the heavy truck industry must change more slowly due to its much smaller production runs and higher component costs. A new truck tractor can cost upwards of $100,000. The bus industry is even more restricted by a small annual market of perhaps 3,000 vehicles in North America.

All of the above make the following points:

- The North American transport equipment manufacturing industry is continental in scale and ownership. It is becoming global in scope.
- Changes in technologies are for the most part slow and evolutionary.
- Limits on the rates of change are primarily the huge capital investments that must be amortized before new technologies can be adopted.
- Technological developments are necessarily slow in arriving and limited in scope. Despite sales claims to the contrary, automobiles are evolving not changing overnight. There are few totally new model introductions.
- The cost of introducing and producing new technologies can be very high. Consequently the ability to start a new industry, in competition with established producers, is limited.
- Despite the above, industries in other nations, like Japan and Korea, are able to start-up and effectively compete.

Manitoba has several established bases of proven production competitiveness upon which to build. The aircraft/aerospace industry is the largest of these. The bus industry shows promise of becoming internationally competitive. A smaller but thriving activity is Manitoba's recreational vehicle industry.

13.2.2 Air Transport

The full Wallace report profiles aircraft through technical descriptions of modern passenger aircraft, including recent models produced by DeHavilland, Boeing, McDonnel Douglas and Airbus Industry. These aircraft are still evolving, showing improvement in the areas of aerodynamics, airframe weight reductions, navigation, and engine efficiency. In-flight control optimization systems are seeing increased use. These systems monitor aircraft performance and weight variables on a continuous basis; the information is used to set critical aircraft engine and flight surface control settings. The single largest transportation equipment manufacturing industry in Manitoba is in producing components for aircraft and performing their overhaul. Furthermore, the aircraft industry provides high quality skilled and semi-skilled jobs. The three largest aviation employers in Manitoba are Boeing, Bristol Aerospace and Standard Aero.

Aircraft technologies identified as promising for Manitoba (development of new industry/expansion of existing) include: engine component manufacturing and overhaul; assembly of complete, modular aircraft sections; and airframe component manufacture, including use of composite materials in structures.

Under Transport Canada's current National Airspace Plan, modernization of control of air routes and airspace around the airports is planned to beyond the year 2000. Most of the systems are designed and much of the equipment is on order for manufacture. Some is recently installed. However, there is a need to improve airspace control off the main airway corridors. Here, due to the low frequency of flights, typically by small to medium size aircraft, it is only feasible to develop navigational capabilities primarily held within the aircraft. Loran "C" and to a greater degree Global Positioning (GPS) systems are becoming increasingly available.

For the latter part of the 1990s GPS should be operational worldwide and, unlike the Loran "C", will be available to users at no capital or operating cost for equipment not aboard the aircraft. To that end, there should be opportunities to develop GPS navigational receivers that are low cost, reliable and easy to use.

Passenger terminal technologies are similar for the road, rail and air modes and hence are not differentiated. The most sophisticated terminals are air passenger structures. There is not a large demand for special equipment unique to new manufacturers. Much of a terminal is composed of readily available components. Items which were ranked highest in the main report as showing most promise for production in Manitoba include: passenger terminal information and guidance systems; passenger and baggage security systems; baggage validation and check-in equipment.

13.2.3 **Highway Transport**

Highway vehicles covered in the main report include the automobile, bus, truck and recreational vehicle. Items examined include engines (turbocharging, multivalving, ceramics), transmissions (viscous fluid differential, continuously variable transmission), steering (all wheel), braking (anti-skid), suspension (active), body types (space frame, modular), manufacturing process (automation) and driver information systems (collision avoidance, speech recognition, navigation). Future advances in these vehicle components will have positive effects on reducing fuel consumption, increasing passenger safety, vehicle reliability, ease of operation, and provision of information (vehicle and route data) to the driver. Due to the size of the automobile market most advances are first made in automobiles and subsequently extended to other highway vehicles.

The main report quantifies and ranks specific highway vehicle technologies with respect to creating manufacturing opportunities in Manitoba. The ranking process and complete results are too detailed for inclusion in this summary. However, leading automobile technology candidates include:

- on-board navigation system,
- electric power steering,
- voice-activated comfort controls, and
- low cost anti-skid braking.

Navigation systems would yield potentially high value added, due to highly-skilled labour requirements, and much of the technology required to produce these systems resides in Canada. The other leading candidates all provide attractive reasons for further development. Electric power steering has a potentially very large and accessible market in North America. Voice-activated comfort controls have a relatively low start-up manufacturing capital requirement plus high value added content.

Bus manufacturing technologies, already well established in Manitoba, are similarly highly ranked for potential expanded manufacturing application in the province. These include:

- passenger comfort systems (licenses resident in Canada, low start-up capital, and low perceived risk);
- special-use bus bodies (e.g. handicapped); and
- normal bus bodies.

Manitoba has a well-established manufacturing base in recreational vehicles (RV's). This report ranks development of lower weight RV bodies most highly within the group of truck and RV technologies. Licenses are locally held, value added content is high and the market will continue to expand with the growing retired population; this results in low project risk and short product development time. Also highly ranked are navigational systems (as per automobiles) and rearward-looking video systems (short product development time, good market location, low start-up capital, low risk).

(Reviewing an earlier draft, the Manitoba Department of Industry, Trade and Tourism made two important comments on this section, in addition to valuable input throughout the chapter. Firstly, while there is always room for additional companies to Manitoba, there must be reservations on trying to attract those who would be in direct competition with companies already located here. Secondly, in the light of the recently concluded Urban Bus Industrial Development Sub-Agreement, the Department is rethinking its approach to major manufacturers with regard to implementing R. & D. programs in Manitoba with the purpose of eventually manufacturing new and highly sophisticated systems.)

13.2.4 Railway Transport

Railway vehicles are profiled in the main report. Vehicles for railways consist of locomotives, freight cars and passenger cars. The market in North America is small and the equipment has a relatively long life, ranging from 15-25 years for locomotives and 20-40 years for freight and passenger cars. Annual production is small and is concentrated in a few established locations. Manitoba does not have a large established industry manufacturing rail equipment, hence technological developments in this mode hold few production opportunities for the province.

No truly new technologies were identified for the "way" component of the railway system in Canada. One area that could be further explored is that of communications for improved traffic control. There is a Canada-United States study on introducing Automatic Train Control Systems more widely throughout North America. While not examined in this study, there may be communications and computer/software system opportunities which Manitoba's industry could develop. A system of train location based on Global Positioning Satellites (GPS) or Loran "C" may have applications. Any firm developing such systems for motor vehicles or aircraft should consider extending the system to trains. The market is much too small to develop a unique system for train location only.

Research into concrete tie/rail fasteners may be a productive area in that the costs of research and capital for plant will be modest thereby facilitating the start of a new industry to produce such fasteners. The market would be worldwide.

13.3 MANITOBA POTENTIAL FOR MANUFACTURING NEW TRANSPORT TECHNOLOGIES

13.3.1 Current Situation

The identification of promising areas for future development in transportation equipment manufacturing in Manitoba can be made on the basis of two primary criteria:

a) technology should be current state-of-the-art or available in the short term future, and

b) the opportunities must be within the existing or expanded capabilities of the equipment manufacturing industry. New plant locations are of course welcome.

Identification of opportunities is just that; it does not provide guarantees that investments in new technologies will succeed. Nevertheless, the report screens a list of possible opportunities against qualifying/disqualifying criteria. The result is a "short list" of promising opportunities for the short term future. Each promising technology must be further examined in great depth, since most new ventures will require major capital investment and other ongoing commitments.

In Canada, many of our transportation manufacturing industries are "branch plant" assembly operations. These too frequently provide relatively low value added products produced by mostly unskilled and semi-skilled employees. For example, the automotive industry in Canada is primarily an assembly plant industry, where high value parts, manufactured elsewhere, are combined by assembly line workers.

The recent influx of non-North American auto manufacturers has created assembly plants for auto parts manufactured in European and Asian countries. Only limited parts manufacturing is done in Canada. These are frequently for simple items of low value. However, high value vehicle parts should be manufactured in Canada. This would expand the value added content and increase the numbers and quality of jobs in that industry.

The aircraft manufacturing industry is much different from the auto industry. Of the two commercial aircraft manufacturers, Canadair is Canadian owned, while deHavilland of Canada is owned by Boeing of the United States. The aircraft jet engine manufacturer, Pratt and Whitney of Canada, is a wholly owned subsidiary of its U.S. parent. The difference in the aircraft industry from the auto industry is that the foreign-owned branch plants in air do design, manufacturing and assembly work while for the most part, auto assembly plants simply assemble vehicles from parts produced elsewhere. Pratt & Whitney of Canada has a world mandate for the engines it designs and manufactures. It is highly successful. Similarly, deHavilland has sole responsibility for the design, manufacture and assembly of its family of turbo prop aircraft. Canadair produces a line of commercial and military aircraft. In the aircraft parts manufacturing arena, Boeing of Canada provides high-quality manufacturing and assembly jobs to produce major components for its product line.

The railway equipment and solids pipeline equipment industries offer little opportunity for expansion in Manitoba and are not elaborated further.

The preceding preamble demonstrates that while it can be preferable to develop transportation equipment manufacturing technologies that are Canadian owned, it can also be very satisfactory to be part of a larger foreign firm. In the latter case this is true if the Canadian subsidiary has world product mandates for quality, high value products. An advantage of the Boeing type of parent company is that worldwide marketing facilities are available for the Canadian portion of the product.

New products can compete in established markets. Sweden, with an economy about one third the size of Canada, has flourishing motor vehicle and aircraft industries. Japan, now the second if not the largest automobile manufacturer in the world, moved onto the world stage after World War II. It did so by licensing English technology for small car bodies and German engines/transmissions. While producing these "foreign" technologies, it improved on them and developed original products. It did the same for cameras and is in the process of moving into airframes and aircraft engine production.

If we wish, and it is beneficial, the same can be done in Manitoba and Canada as a whole. The crux is, do we have the will to follow the "way" to make it happen? Further, are we willing to pay the costs of making it happen? The future of the transport equipment manufacturing industry in Manitoba hinges primarily on the answers to these questions.

In this report, numerous technologies are evaluated. Some will be easy to implement. Some will be difficult. Some will be expensive and some will have high risks of failure. The choice of final product selection and implementation will be the responsibility of Manitoba and its industries. It will be up to Manitobans to ensure they receive their equitable share of federal support to encourage location of desirable industries in Manitoba. No one else will look after their interests if not "encouraged" to do so. In 1988 the Magna International Corporation opened a new engine parts manufacturing plant in Nova Scotia, costing $50 million. At the opening ceremonies it was announced the plant was to be doubled immediately at a cost of an additional $50 million. Opportunities for motor vehicle parts manufacturing do exist outside Ontario.

13.3.2 Conditions for Successful Development

It is apparent that Manitoba has not achieved its potential in transportation equipment manufacturing in all modes vis-à-vis the rest of Canada or the world. The aircraft/aerospace industry is an exception with much of its production exported. Other modes, like rail and truck, are not promising new thrusts. The biggest "plum" to pursue is the auto parts manufacturing industry. Obviously it will be extremely difficult to become established in this area in Manitoba, but it is so large, overshadowing all other transport equipment manufacturing, that every effort to develop it should be made. Any progress in this area will be against stiff competition from the other provinces, American states and other countries.

Motor vehicle parts and assembly industries have developed in the most unpromising locations (Korea, Taiwan, Thailand and others) to serve the North American market. Surely, a determined effort will result in success for Manitoba.

The main report identifies new transport technologies that Manitoba can start manufacturing. However, the majority of opportunities will come from locating modern, cost competitive, new manufacturing capacity for current technologies in Manitoba to replace obsolescent, high cost facilities located elsewhere or to increase capacity. The excellent labour force in Manitoba is a strong asset. To achieve new technological opportunities, increased research and expanded technical education facilities are required. A review of evaluation criteria shows that under "Ownership of Technological Licences", Canada does not own the majority of needed patents. Consequently, Manitoba will be forced to buy the technology abroad. Sometimes it may not be for sale or may be obtained only with market restrictions. For this reason, Manitoba's government and industries must do applied research and obtain ownership of new technology. This is the successful pattern employed by Japan. It can be applied to Manitoba. Care must be taken to focus on selected areas of expertise for development to effectively concentrate the small resource base of the province on "winners".

Federal and provincial assistance is very important, but the financial short term aid they offer is not as important as commonly believed, simply because it is short term. The most effective aid lies in the diplomatic, political arena, where long term mutual benefits can be agreed upon. Politics are important in locating foreign plants. Manitoba must become more effective in obtaining political support.

Finally, to attract manufacturing of new technologies, the time frames from concept to production for significant opportunities will often be longer than five years. Some could be 10-15 years. Obviously few industries can wait 15 years for a return on investment. However, a province or a nation as a whole can, if it so chooses. Basic and applied research needs to be supported on a larger, longer term scale than is currently done in Canada. Canada spends one of the lowest percentages of its Gross Domestic Product on R&D of the developed nations. The overall state of our manufacturing shows it.

13.3.3 Specific Opportunities

Promising areas for the manufacture of new technology transportation equipment are primarily in vehicle parts and components, not in entire vehicles. A summary of specific opportunities/non-opportunities follows. However, it should again be noted that most transport equipment manufacturing opportunities lie in attracting industry seeking to expand from obsolete production plants located elsewhere, rather than in discontinuous quantum leaps in transport technology used in the manufacturing process.

1. **Aircraft components** manufacturing, overhaul and repair are currently the most successful transport equipment manufacturing activities in Manitoba and offer the best opportunities for the foreseeable future.

Particularly promising areas are: total aircraft overhaul, engine component manufacturing and overhaul, manufacture and stuffing of aircraft sections, and expansion in component manufacturing using composite materials.

2. **Bus and recreational vehicle** manufacturing are the second most successful manufacturing businesses. For bus manufacturing a major cloud on the future is the severe overcapacity of production facilities in North America. The conservative approach of purchasers requires proven, reliable technology, but this does not necessarily inhibit technological innovation. Nevertheless, the industry is likely to have a steady but not highly profitable and innovative future market.

   Recreational vehicles have a strong future, growing from a small slowly expanding market base. Tariff protection for Canadian producers will disappear when Free Trade is fully implemented and this will force the industry to become more cost competitive.

3. **Automotive parts** ranked rather lowly in the evaluation of opportunities. This was due to several factors, among which were:

   - The lack of a strong auto parts manufacturing base in Manitoba.
   - Auto manufacturers are reluctant to use unproven manufacturers of new parts. Reportedly the Japanese firms demand a minimum of three years good record before purchasing from a supplier.
   - The "just-in-time" concept of having parts suppliers located within four hours delivery time or a 300 km radius of their assembly plant. The auto industry hence prefers to use parts manufacturers located in Southern Ontario.

   However, despite the above obstacles, the potential for high value, good quality jobs in the industry is so great that every effort should be made to bring it to Manitoba. Magna International has established an engine component manufacturing plant in Nova Scotia. The Winnipeg region is more favourably located to the Detroit/Windsor area than is Nova Scotia. Hence, the geographical handicap can be overcome using supplier stocked warehousing next to assembly plants, and/or air/truck delivery of parts direct to plants. Winnipeg is within 24 hours trucking time of Windsor and only a few hours by air.

4. **Truck manufacturing** does not have a bright future in Canada due to overcapacity in the North American market. Further, rationalization of the industry on an international scale is currently taking place. Hence, opportunity is limited for attracting manufacturers of truck components to constructing modern plants in Manitoba to replace obsolete capacity facilities located elsewhere.

   There is a substantial business in Manitoba manufacturing truck trailers. Given the large Manitoba interprovincial trucking industry there will be opportunities for increased manufacture of trailers. The technologies required are well established and hence this industry does not offer new opportunities. However, there are opportunities for expanding existing production.

5. **Railway vehicles** have no manufacturing base in Manitoba, apart from work carried out in-house by CN Rail and CP Rail. Consequently, there is little prospect of creating one. It is not a fast changing industry and hence is not a good prospect for manufacturing based on new technologies. One exception is the adaption of motor vehicle/aircraft GPS/Loran "C" position location equipment to trains.

6. **Roadways** have no identified base, and are not recommended as a strong focus.

To conclude, Manitoba has a strong base in aircraft upon which to pursue additional expansion. By the highly mobile nature of the vehicles and their high value per kilogram, the Manitoba industry can compete globally for markets. A largely untapped opportunity lies in the auto parts industry. Despite past heroic efforts to attract motor vehicle parts manufacture, the efforts have been largely unsuccessful. However, the potential is so large that it is worth pursuing further. Other less industrially favoured regions have been successful. So can Manitoba.

13.4 SUMMARY

This chapter has been a summary of a much lengthier study and only a number of major points can be highlighted in this final section.

1. It has been suggested earlier in the present study that the pace of economic change is simultaneously both slower and faster than one might anticipate - slower in the sense that obvious need for change can drag on for years before it actually occurs, and faster in that the pace of change can suddenly accelerate, for example in respect of the recent transport deregulation measures. The same is true of technological change. Some technologies change little from year to year, while the pace of change elsewhere is astoundingly fast, for example in the use of computer-based technology. While this comment may be regarded as a statement of the obvious, it is made as a general warning on the uncertainty of technological forecasts and hence of the basis for the business and policy decisions which must be made for the future.

2. As far as the transport service industries are concerned, the technological survey in the Wallace study anticipates considerable productivity improvements and the production of transport services at lower real cost. Manitoba will benefit from these changes, but they will add to the burden of reduced employment opportunities in transport. However, this survey does not suggest quantum changes in transport technology to an extent that would make the provision of transport services in the year 2000 non-comparable with the 1989 situation. In short, there will be gradual change rather than the replacement of existing technologies with completely new developments.

3. The report highlights the long time horizon for major investments in the transport equipment industries and shows how these industries operate on a North American basis, which is often becoming global in scope. Specific developments for the air, highway and railway transport modes are described and developed in greater detail in the main Wallace report. Air transport developments will be substantial with Manitoba well-placed to take advantage of these. Very low Manitoba representation in the motor vehicle parts industry limits prospects here. Rail potential for development is poor in Canada and hence in Manitoba.

4. In the development process, technology has either to be readily available or government has to be prepared for a long haul financially. It is easier to build on existing industries than to develop completely new technological initiatives. Branch plant operations can be a disadvantage if they confine production to unsophisticated items and it is suggested that this is often true of the automobile parts manufacturing industry. However, branch plants are not necessarily a disadvantage, if they are given a world mandate to do their own designing, manufacturing and assembly work and the parent plant creates a substantial and sophisticated market. This is often the case in respect of the aircraft manufacturing industry.

5. A technological scan of future transport equipment manufacturing activities was carried out in the Wallace report. It is stressed that this type of analysis identifies new transport technologies, but still leaves the problem of implementation in the hands of entrepreneurs and governments. The will of government to implement change - both at the provincial and federal levels - is essential, particularly if Manitoba is to gain a share of the large automobile parts manufacturing industry from which the province is presently almost excluded. This is no small challenge given that, over a period of more than twenty years, the Province of Manitoba has made determined but so far unsuccessful efforts to attract significant automotive parts manufacturing.

6. Specific opportunities are identified in the last part of section 13.3. Aircraft components and bus and recreational vehicles are ranked highly. Opportunities in truck manufacturing and railway vehicles are not promising. The province has little base on which to develop an automotive parts industry, but the importance of this industry is stressed. Reference is made to the success of Nova Scotia in achieving location of an engine parts plant by Magna International Inc., even although Nova Scotia is far further than Manitoba from the centres of automobile manufacturing in Ontario and Michigan. Manitoba is urged to make similar efforts.

However, without becoming negative, a word of caution is necessary. The June 12, 1989 issue of The Financial Post warns that the earnings of Magna International Inc. have plummeted and that "once the golden racehorse of North American parts makers", the company "is discovering it cannot run at full speed forever". There are always dangers in looking for plums in industrial development - and it is perhaps significant that the Wallace report did not recommend Manitoba to seek the location of an automobile manufacturer, as distinct from a parts manufacturer, probably drawing on memories of experiences elsewhere in the world, for example Bricklin and de Lorean.

Specific recommendations on the transport equipment manufacturing industry were given in Chapter 6 and the present chapter concludes with some general reflections taken from the Wallace report. Manitobans have achieved great successes in their transport equipment manufacturing industries, but not in proportion to their population size. With some 4.1% of the nation's population, the province has 3.2% of transport equipment employment. Its value added content exceeds the national average by a significant margin. Its labour force is well trained, productive and less costly than the average for Canada. The central geographical location is advantageous, particularly for the aerospace industry, and much of the transport equipment manufacturing sector is not sensitive to transport costs. This combination of positive factors should result in Manitoba capturing a larger than proportional share of the industry.

The first step in correcting this anomaly could be a thorough examination of why some previous opportunities died. This should include such areas as: cost competitiveness, availability of required skills, tax structures and labour regulations that could discourage new industries. Finally the province must find an effective way to ensure the federal government permits it to compete fairly for major national projects. The establishment in late 1989 of a Manitoba office in Ottawa could provide the avenue to deal with this problem.

CHAPTER 14: OTHER EXTERNAL FACTORS

Chapters 11 to 13 have discussed factors which will affect the transport industries in Manitoba to the year 2000 - the Manitoba economy, transport regulation, and technological developments. Demographic change has also been discussed in Chapter 11, although this will proceed fairly modestly to the year 2000, accelerating in the early years of the next century. The review of technological developments in Chapter 13 included reference to the growth in computer technology. The communications field has seen a technological revolution in recent years and this is still continuing at a rapid pace, resulting in very substantial reductions in the real costs of communication. This will have repercussions on transport, substituting communications for business travel over the coming years.

There are many other external factors which will affect transport over the next decade, but a comprehensive analysis is beyond the scope of any transport analyst. For example, developments in two of the major issues facing civilization - nuclear war and the population explosion - could throw any forecasts completely out of kilter, but there is not much that can be done about this in the present exercise. After considerable reflection on external factors not examined in earlier chapters, it was decided to confine Chapter 14 to three subjects - the Canada-United States Trade Agreement, energy, and environmental considerations. These are discussed essentially from the standpoint of a layman, as background to the two final chapters of the study; obviously, there can be no list of recommendations in Chapter 14.

14.1 Canada-United States Trade Agreement

When the present TIDAC study of transportation to the year 2000 was commissioned, the Free Trade Agreement issue was still unresolved and this had very high profile in public debate in Canada. Following the election in 1988, the agreement came into effect on January 1, 1989 under the title Canada-United States Trade Agreement (CUSTA). The present section addresses this issue only in a transportation context.

The transport service industries themselves are not part of CUSTA. Transport services were originally candidates for inclusion in the services part of the Agreement, but ultimately this was dropped. The U.S. marine industry refused to agree to an exchange of domestic traffic rights with Canada. The position of the U.S. marine industry is well summarized in the following remarks of M.S. Wasacz, President of the Matson Navigation Company Inc., before the U.S. Senate Committee on Finance on August 17, 1987.

> Section 27 of the Merchant Marine Act of 1920, generally referred to as the Jones Act, requires that, with limited exceptions, ocean transportation for merchandise moving between two points in the United States must be provided by vessels built in and documented under the laws of the United States and owned by persons who are citizens of the United States. The U.S. documentation requirement limits crew service on such vessels to United States citizens. On the other hand, the Canadian Cabotage Law, while requiring documentation under the Canadian flag, permits the use of foreign-built and foreign-owned vessels which are crewed by any citizen of the British Commonwealth. The Canadian vessels have substantially lower capital and operating costs than U.S. flagged, Jones Act vessels. Entry of Canadian vessels into United States Jones Act trade would present substantially unequal competition with large, new cargo opportunities for the Canadian vessels and very small new cargo opportunities for the U.S. flag vessels. The North American Jones Act proposed by Canadian negotiators has the potential for irreparable damage to the United States Merchant Marine and the American Shipyard base required for its support.

Both Houses of the U.S. Congress accepted the position of the U.S. marine industry and brought forward resolutions to remove all maritime services from the negotiating process. Following the withdrawal of marine services from the negotiating table, further discussions were raised on other sensitive transport issues. Although the forces taken into account by the negotiators are not a matter of public record, Canadian concerns probably related to U.S. competition in highway transport and possibly in the air mode. In the end, all transport services were removed from the negotiating table.

It has been suggested earlier in the present study, particularly in respect of the air mode, that this need not be a final position to the year 2000. Closer integration of the Canadian and U.S. economies could lead to a re-opening of negotiations on transport services. But, this is speculation and the transport services were not affected directly when CUSTA became effective on January 1, 1989.

However, the exclusion of transport services from CUSTA does not mean that the Agreement will have no impact upon the Canadian and U.S. transport service industries. Lower tariffs, increased exports and imports and the reduction in non-tariff barriers will increase the north-south flow of traffic relative to present east-west flows. U.S. customs user fees are to be eliminated by the beginning of 1993 and this will also facilitate north-south movements. Passenger transport demands are also expected to increase, with easier temporary access for business persons working across the Canada-U.S. border providing such functions as post-sales services, professional services, management contracts and services to subsidiaries in the other country.

Canada-U.S. tariffs are to be eliminated over a ten year period, which commenced January 1, 1989, with tariffs on many sectors following an expedited schedule for elimination by January 1, 1993. In terms of the most important sectors of the Manitoba economy, the full ten years is to be taken for tariff elimination on agricultural products and in the food and beverage, clothing and transport equipment manufacturing industries. Paper and allied products and printing and publishing are on a five-year tariff phase-out and this is also the pattern for most sectors of the wood and furniture industries. There is a mixture of 1993 and 1998 dates in other industrial sectors - primary metals, fabricated metal products, machinery, electrical and electronic products, non-metallic minerals, petroleum and chemicals.

Prior to CUSTA there was a considerable amount of trade between Canada and the U.S. which was not subject to tariffs. At least 70% of Canadian exports to the U.S. were tariff-free; the proportion was not much less than this on U.S. exports to Canada, reflecting the importance of duty-free trade in automobiles and automobile parts. In respect of all dutiable trade, i.e. excluding products not subject to tariffs prior to CUSTA, the negotiators estimated that the U.S. tariff on Canadian exports was equivalent to some 6% of the product value, while the Canadian tariff on U.S. exports was equivalent to approximately 11% of product value. However, even with tariff elimination, free trade can still be hindered by countervail action, where tariffs are levied on goods whose production is deemed to be subsidized in the country of origin. Countervail on pork has featured prominently in the media in 1989; as of October 1989, there were some 15 commodities awaiting the attention of the Dispute Settlement Panel and these included salmon and herring from the west coast fisheries, salt cod, Ontario beer, ice cream and yogurt, sugar and steel rail.

The general direction of CUSTA in promoting increased north-south trade is fairly obvious. The quantification of the likely effect seems to have defied econometricians on both sides of the border. UMTI is currently carrying out a sectoral study of the likely effects of CUSTA on refrigerated truck transport, but it will be some time before the results will be available. Chapter 4 of this study pointed out the problem for Manitoba's trucking industry from any substitution of north-south traffic for east-west; Manitoba is particularly strong in the interprovincial motor carrier business, but much less of a force in transborder trucking. However, increased north-south trade brings its opportunities as well as its problems to the motor carrier industry.

Considering the high profile of the free trade issue in 1988, the impact on trade was not very great in 1989, beyond specific problems in such industries as pork and allegations that free trade has caused the closure of some U.S. branch plants in Canada. However, this lack of impact on trade in the short period is not really surprising. U.S. tariffs on

Canadian imports averaging 6% on dutiable items are scheduled to be eliminated over ten or five year periods. This would mean an annual fall of between 0.6 and 1.2 percentage points, say 0.9% on the average. But less than 30% of Canadian exports to the U.S. were dutiable prior to CUSTA, so the tariff fall of 0.9% is equivalent to less than 0.3% of the value of all Canadian exports to the U.S. With the higher Canadian tariff of some 11%, the benefit to the U.S. would be higher, perhaps 0.6% per annum of the value of total U.S. exports to Canada.

Over a year, changes of these magnitudes can be less than the effects of exchange rate fluctuations. According to Bank of Canada figures, the Canadian dollar averaged U.S. 86.20 cents in December 1989 and this was 3.0% higher than in December, 1988. This appreciation in the value of the Canadian dollar was much larger than the effect of one year's implementation of CUSTA. However, in 1990 the Canadian dollar has been falling and, by January 31, 1990, it was at U.S. 84.24 cents or not much higher than in December, 1988. The effects of CUSTA were reduced in the first year of its operation by appreciation in the Canadian dollar; on January's experience, this will not be the position in 1990.

14.2 Energy

On the basis of figures contained in Statistics Canada 57-003, transportation accounted for 29% of total final demand energy utilization in the Canadian economy in 1987. The concept of final demand usage excludes energy consumed in the production of energy itself. For purposes of comparison, industrial usage of energy accounted for 34% of the total, residential usage for 18%, commercial and other institutional usage for 14%, agriculture for 3% and administration for 2%. Of the energy used in transportation, highway transport accounted for 76%, but this included a very substantial utilization for private motoring. Air transport accounted for 8% of the transportation total, pipelines for 6%, marine for 5% and rail for 4.5%.

Energy accounts for a very substantial proportion of the operating expenses of transportation companies. In 1987, fuel accounted for 19% of the operating expenses of Canadian airline carriers (SC 51-002). For-hire and private highway carriage showed a figure of 12% in 1986 (SC 53-222). The relevant comparison for rail transport has not been published since 1981, when it was just under 10% (SC 52-208); with changes in fuel prices, the ratio for the rail industry is now likely to be lower than at that time.

The future of energy prices will affect the transportation industry, the freight rates charged and the distribution of passengers and freight between the different modes. However, the shocks in the decade of rising fuel prices from 1973 to roughly 1982 tended to have fairly marginal long-term effects on the distribution between transport modes, although the search to economize on fuel expenditures was very real. Further gains in efficiency appear to be feasible in the energy field, but there has been no substantial substitution of other fuels for the present utilization of gasoline, diesel and aviation turbo fuel. Of all the energy using sectors of the economy, transportation is the most dependent upon oil as distinct from other fuels. There is apparently little prospect of this changing in the next decade, in spite of experiments to use natural gas as well as propane in automobiles and the possibilities of cheap electricity from nuclear fusion, as distinct from nuclear fission, to fuel electric-powered automobiles and electrified railroads.

It is beyond the scope of the present study to attempt the almost impossible task of forecasting energy prices. Until recently, the experts seem to have expected a continuation of soft energy prices for a few years and then a rise in the cost of energy in real terms towards the end of the 1990s. Sudden movements in fuel prices were not anticipated outside the range already experienced in real terms during the last two decades. In these circumstances, the study assumes that there will be no large exogenous shocks to transportation from the energy area - but with a product as price-volatile as fuel, this assumption is partly an act of faith. Moreover, even if this assumption holds in the long term, there can still be very significant price movements; for example, aviation fuel costs were appreciably lower in 1989 than in 1988, but in early 1990 they were allegedly 50% above a year ago.

14.3 Environmental Considerations

Concerns for the environment can affect the development of transport over the next decade. The discussion below covers the transport of dangerous goods and hazardous wastes and the effects of other environmental concerns on transportation. Finally, brief reference is made to the "greenhouse effect".

The transport of dangerous goods has been regulated for many decades in respect of the rail, air and marine modes, but regulation was less rigorous in the highway mode until fairly recently. Regulations under the Transport of Dangerous Goods Act were promulgated on July 1, 1985 and a full scale monitoring of the movement of dangerous goods and hazardous wastes is now being undertaken in this mode.

In the rail mode, the highest profile accident involving dangerous goods was the Mississauga derailment of November, 1979. This involved leakages of chlorine and propane within the Metropolitan Toronto Region and an evacuation of approximately 250,000 people. Fortunately, there were no fatalities - indeed, there have been no fatalities from any railway dangerous goods accident in Canada - but this accident could potentially have had devastating effects. Although railway efforts to increase safety in the transportation of dangerous goods had been evident before this accident, nevertheless this did stimulate the impetus to improve the construction of tank cars containing dangerous goods and the quality of railway equipment, track and operational practices. Considerable success has been achieved in obtaining greater safety in the transport of dangerous goods by rail.

There have been several major highway accidents involving dangerous goods and hazardous wastes, of which the April 1985 PCB leak at Kenora, Ontario, was very high profile. Obviously, this was not the reason for the promulgation of regulations by government in July 1985, as the regulations had been in the development stage for several years previously. Nevertheless, this accident highlighted the dangers that could occur in the transport of dangerous goods and hazardous wastes by highway. (Views have been expressed from time to time in the media that the transport of dangerous goods and hazardous wastes should be forced off the highways on to rail, as this is regarded as safer. This material has not been reviewed in the present study and comment is therefore not offered.)

Over the last four years, regulation of the movement of dangerous goods and hazardous wastes has been considerably expanded in Canada. In addition to monitoring activities, all movements of hazardous wastes are now tracked by the regulatory agency. This detailed surveillance is expected for all movements of dangerous goods over the next few years and packaging specifications, which are not yet complete, will be finalized. As Canada has recovered from the economic recession of 1982, environmental considerations have assumed a larger role on political agendas and this appears to be continuing.

In terms of other environmental considerations related to transport, these lie primarily in the areas of air pollution, noise and ground reverberation. The problems of urban gridlock and mobility difficulties in large cities have been mentioned earlier in this study. Complaints about noise from airports are found in every large city and Winnipeg is not immune. Residential locations near railway tracks suffer from noise and ground reverberation and, near railway yards, these problems can exist on a continuous basis. Pollution from the burning of gasoline and diesel fuels is mainly a highway problem, in part because the automobile and highway freight transport consume over three-quarters of Canadian energy used in transportation. This list of problems, is, of course, very familiar. With greater environmental consciousness, there could be increased action on this front in the upcoming decade. This would tend to increase transport costs and have some effects on modal split.

In the short term, climatic conditions can have a major impact on transport in affecting the amount of freight which has to be moved. For example, drought conditions in the prairies in 1988 substantially reduced the volume of grain to be moved in the crop year 1988/89. In the longer term, there is the problem of the "greenhouse effect" where a warming trend in climatic conditions in the planet is predicted due to a build up of carbon dioxide and other trace gases in the atmosphere. Some climatologists consider that this warming trend is already apparent.

A result of the "greenhouse effect" may well be a northward movement in the temperature belt most favourable for field crops. However, there is apparently little consensus among the experts as to what the potential effect will be on precipitation. Some forecasters expect a greater severity and frequency of drought in the short grassland areas of the prairies. Other consider that the warming trend could result in increased precipitation and an improved environment for crops requiring a longer growing season. As in the past, technological innovations in crops, varieties and farming techniques will be essential to adapt production practices to climatic variability. In other words, depending upon which school of forecasters is right, the warming trend could either reduce or increase the demand for transportation of agricultural products in the prairies.

CHAPTER 15: THE MANITOBA TRANSPORTATION SCENE IN THE YEAR 2000 PROJECTIONS AND TARGETS

Part 1 of the present study has examined the transport service industries and the transport equipment manufacturing industries of Manitoba, surveyed the attitudes of users of transport services, and addressed a number of policy issues in the transport field. The earlier chapters of Part 2 have considered the framework of change to the year 2000 with particular reference to the Manitoba economy, transport regulation, technological developments and other factors such as the Canada-U.S. Trade Agreement, energy and the environment. The study now turns to the future of transportation activity in the province to the year 2000.

As a brief guide to the approach in this final chapter, section 1 starts with general considerations, which are often very important, but not easily related in quantitative terms to the targets to be developed later. Section 2 establishes targets for Manitoba activity in the transport service industries. Targets for transport equipment manufacturing are set in section 3. Service implications are addressed in section 4. Section 5 is a general summary. Recommendations have been offered throughout the study and these are listed for ease of reference, at the end of the chapter.

15.1 GENERAL CONSIDERATIONS

Three chapters of the study deal with transportation matters of a general nature.

15.1.1 The Transport Service Industries - Overview

Chapter 2 sets the stage for the later analysis of the individual transport modes and stresses the overall need for commitment to action by the federal and provincial levels of government. For ease of presentation, this chapter also includes the specific issue of the Port of Churchill.

Railway employment is declining throughout Canada and this is a particularly acute problem in Manitoba because the province has such a large share of this declining employment sector. Regulatory change and the Canada-U.S. Trade Agreement could adversely affect Manitoba's role in the trucking industry. In the air industry, Manitoba has lost much since the days when it was the national headquarters for Air Canada. The future of the Port of Churchill has been uncertain for many decades; apart from its contribution to the grain export trade, Churchill has a national role in respect of Canadian sovereignty, defence and northern development.

Declining employment in the rail industry is unlikely to be offset in other transport sectors. There must be a joint federal and provincial effort to establish other employment opportunities. The federal government has recognized this need by setting up the Western Diversification Office; the provincial government has recognized this need in the continuing work of its Department of Industry, Trade and Tourism. Much of Manitoba's employment in transport services and in transport equipment manufacturing is not necessarily tied to the province and the retention and expansion of this employment is extremely important. Federal and provincial government policies must be conducive to maintaining an attractive environment in Manitoba for these activities.

15.1.2 The Transport Policy Framework

The transport policy framework is reviewed in Chapter 10; this is, of course, a subset of the overall political framework. During recent years, federal transport policy in Canada has been characterized by increased reliance on competitive forces, privatization of publicly owned transport carriers, and an attempt to reduce government subsidization of transport. Reliance on market forces is likely to continue as the dominant influence on the transport policy framework until perhaps the mid-1990s. By then, given the inevitable swings in the pendulum of political change, reliance on competitive forces may have peaked and economic interventionism may be less out of favour. This would imply that the prospects for federal government intervention in the transport service and transport manufacturing sectors of the economy could be better in the second half of the 1990s than in the earlier years of the study period.

In terms of specific issues, Chapter 10 recommended that the procurement expenditures by both the federal and provincial governments should have maximum impact on the transport service and transport equipment manufacturing industries of Manitoba. The loss of the CF-18 maintenance contract in October, 1986, was a severe blow to the province and defence contracts are essential to the success of the aerospace sector. Latest published figures for 1987/88 showed some improvement in Manitoba's share of federal government expenditures on materials and services. However, the provincial government must continue to bring provincial needs forcefully to the attention of the federal government in respect of procurement policies.

High levels of taxation, both personal and corporate, have been identified in Manitoba and examined in detail in the study. The payroll tax is a particular source of hostility. Although the relevant interviews were conducted before the announcement of Ontario's intention to introduce a payroll tax, this may not reduce the impact of the Manitoba tax, as any threatened relocation of industry was in the direction of Alberta rather than Ontario. A major tax resentment in railway transport is the locomotive fuel tax. Property taxes in the City of Winnipeg are also high. In terms of taxation, Manitoba cannot afford to be out of line with competitive jurisdictions or it will lose investment opportunities.

15.1.3 Transport Regulatory Change

It is argued in Chapter 12 that the era of transport regulation as a major policy tool has now passed. While this is to be welcomed on most counts, there are still unresolved problems, particularly how to deal with duopoly in the railway and mainline air transport modes and how to disseminate information on freight rates when so many agreements are confidential. The province will therefore have to continue a watching brief on federal activities in transport regulation over the next few years.

However, apart from possible changes in the Western Grain Transportation Act, the regulatory scene is likely to be quiet until the mid-1990s. Any changes after that time are unlikely to have major effects on transportation services and employment in Manitoba before the end of the decade.

15.2 EMPLOYMENT TARGETS FOR THE TRANSPORT SERVICE INDUSTRIES

This section establishes targets for Manitoba employment in the transport service industries. The discussion starts with projections of national employment for the transport service industries in Canada as a whole in the year 2000. These are used as background to establish Manitoba targets later in this section.

The detailed examination for Manitoba commences with the air mode. A target employment for the year 2000 is specified, together with action needed to achieve this target. This is compared with the employment that would be achieved, if Manitoba maintained its present share of air industry employment to the end of the century and also with a more depressing scenario, where the industry does not progress much beyond its present employment. This approach is then repeated for the highway and railway transport modes and a composite picture is presented for all transport service industries.

It had originally been the intention to include forecasts for the mid-year of the period under review, namely 1994 or 1995. Although it is possible to discern some trends that would operate more strongly in one part of the study period than in the other, targets for 1994/1995 generally tended to be midway between the years 1989 and 2000. In these circumstances, separate figures have not been produced for the mid-point of the study period.

15.2.1 National Projections

Table 15.1 shows past data and forecasts of Canadian employment in the transport service industries. Forecasting is an imprecise discipline and the problems never make interesting reading. However, two caveats must be noted.

Firstly, 2000 is assumed to be an "average" year, when the economy is neither in boom nor recession. This assumption is unavoidable; forecasts for the year 2000 should relate, more correctly, to "about the year 2000", to allow for the effects of random variations in economic conditions.

Secondly, the compilation of many of the statistical tables used in this report has been extremely complex. Revisions in the basis for collection of statistical data have been frequent and changes in methods of collection and the coverage of individual sectors of activity will almost certainly continue into the future. Accurate forecasts could appear incorrect as a result of these future changes; less probably, inaccurate forecasts could appear to be correct.

Table 15.1: Employment in Transport Services-Canada

thousands

	1966	1971	1976	1981
Air	23.2	31.3	41.8	46.9
Highway			94.0	103.0
Rail	114.0	108.0	103.0	101.0

	1983	1989	Forecast 2000
Air	50.8	63.9	86.0
Highway	104.0	121.1	136.0
Rail	95.7	73.5	50.0
Urban	35.0	38.3	44.0
Highway mtce.	63.7	56.4	60.0
Other	113.5	115.9	112.0
Total	462.7	469.1	488.0

Source: UMTI forecasts for the year 2000; data for 1983 and 1989 from Table 2.1; earlier figures for air, from Table 3.1; for highway from Table 4.1, adjusted to include estimated employment in household removal and bus industries; for rail from Table 5.1, adjusted for statistical reclassification of 1981. As noted in earlier tables, all figures for 1989 relate to November 1988/October 1989, as these were the latest data available.

Air transport has been the most rapidly growing sector of transport in Canada for several decades. Over the long term, the growth averaged 1,500 jobs per annum in the 1970s and 2,100 jobs per annum in the 1980s, but this growth has fluctuated considerably from year to year. The long term rate of growth is assumed at 2,000 jobs per annum until the year 2000.

Highway transport consists mainly of for-hire trucking, with household removals and bus services together accounting for 10% of the employment. The figures are less reliable on an historic basis than for the air mode, but the average increase in employment over the last decade seems to have been in the order of 2,000 jobs per annum. Again, this is subject to considerable fluctuation, as seen, for example, in the sharp fall in trucking employment in the 1982 recession. With a perceived over-capacity in the industry at present and the threat of competition from large U.S. trucking firms, the rate of increase in employment is taken as 1,500 jobs per annum to 1994 and 1,250 jobs per annum thereafter.

Railway employment in Canada and, for that matter, in most of the world has been declining for many decades. This will continue as the railways become more cost conscious, with operations more efficient, track maintenance more highly mechanized and newer generations of equipment needing less overhaul and repairs. The decline in railway employment was fairly modest in Canada from 1966 to 1981, averaging about 1,000 jobs per year. In the 1980s, the decline was much greater, with employees in railway equipment the most severely affected. In the 1990s the main downward pressures on employment will be in track work, as a result of greater mechanization, and in railway operations, following implementation of cabooseless trains.

Media rumours in late 1988 suggested that CN would be down to 26,000 jobs by the year 2000. A comparable loss by CP and the smaller Class II railways would leave about 21,000 jobs. The VIA Rail employment cutback effective January 15, 1990, cost some 2,700 jobs. UMTI forecasts railway employment for the year 2000 at 50,000.

The present study has focused on the air, highway and rail transport modes, with little attention to other modes, where employment exists almost entirely to service local demands. The accuracy of the forecasts for these modes in Table 15.1 is only of secondary importance. Employment in urban transit will continue to increase. Employment in the maintenance of highways and bridges has fallen appreciably in the 1980s, largely as a result of inadequate maintenance of the nation's highways. As outlined in Chapter 4, a strong effort is now being made by provincial Ministers of Highways and Transportation to rectify this situation. However, the effects of any increased expenditures on employment will be muted by continuing improvements in productivity and technology. A modest increase in employment is assumed.

Other transport covers a multitude of activities - these include water transport, pipelines, taxi cabs, travel agents, parking lot operations, school buses and ambulance services. A marginal reduction in employment is assumed, but this is the group most likely to be affected, upwards or downwards, by revisions in definitions and data coverage over the next decade.

Between 1983 and 1989, transport employment in Canada increased by only 1.4%. The forecast of total employment in transport services for the year 2000 is only 4% higher than the figure for 1989. This low growth is consistent with experience over at least the last twenty years and this gives some degree of comfort to the forecasts for individual modes, which were arrived at independently of the total figure.

The forecasts developed for Canadian employment in the transport service industries are used below in the development of targets for Manitoba employment. To some extent, the successful attainment of targets in Manitoba could lead to the location of activities here which might otherwise have been in the United States and hence to an increase in total Canadian employment. However, allowance is not made for this in the overall Canadian forecasts, as any adjustment would be modest in comparison with the potential errors that are endemic in any forecasting exercise.

15.2.2 The Air Transport Industry

Table 15.2 shows air transport employment in 1983 and 1989, together with three scenarios for the year 2000. The discussion focuses on the target figure set for the year 2000. Figures are also shown to indicate the outcome if Manitoba were to retain its present share of 5.6% of Canadian employment in air transport, together with a pessimistic scenario showing no real progress over the next decade.

Table 15.2: Employment in Air Transport

	Manitoba thousands	Canada thousands	Manitoba %
Actual 1983	3.0	50.8	5.9
Actual 1989	3.6	63.9	5.6
Forecasts 2000			
No progress	4.2	86.0	4.9
Maintain % share	4.8	86.0	5.6
Target	5.2	86.0	6.0

The composition of Manitoba's employment in air transport in 1989 was explained in some detail in Chapter 3. Roughly 1,800 jobs served local demand, mainly services from Winnipeg to other Canadian cities and the U.S. and air services in northern Manitoba. In broad terms, employment in this sector of the industry should increase at roughly the same rate as for Canada as a whole to the year 2000. This would give employment then of 2,400. Obviously, this figure is subject to some fluctuation depending upon a variety of factors - the overall development of the Manitoba economy, activity in the north, government policy towards isolated settlements, and transborder air services from Winnipeg. However, these uncertainties are likely to have less effect on employment than the uncertainties on other air transport jobs in Manitoba discussed below.

Of the total air transport employment in Manitoba in 1989, some 1,800 jobs were to provide services not necessarily tied to the province. These consisted of the Air Canada Finance Branch (570 jobs), the Air Canada overhaul base (470 jobs), the Gemini Airline

Reservation System (160 jobs), and other Air Canada and Canadian Airlines International Limited (CAIL), say 600 jobs. The employment target in Table 15.2 requires an increase in these 1,800 jobs of 1989 to 2,800 jobs in the year 2000.

The Air Canada Finance Branch is not an expanding operation in terms of employment; the automation of procedures has more than offset the growth in airline travel. Gemini is expecting an increase in employment to about 200 by 1991 and, hopefully, beyond this figure in later years.

Excluding the Air Canada overhaul base, the other Air Canada and CAIL footloose employment in Manitoba consists mainly of the use of Winnipeg as a base for crew assignment, together with some of the sales, servicing and reservations functions. With reduced flight crews in newer aircraft, prospects for increased employment of pilots are not very promising. Winnipeg is the only pilot and co-pilot assignment base for Air Canada between Toronto and Vancouver, but flight attendants are also assigned at Calgary. Although Winnipeg is the only CAIL base for flight attendant assignment between Toronto and Alberta, pilots will no longer be assigned here after September, 1990. The target for footloose employment in this area for Air Canada and CAIL is specified at 700 in the year 2000, for an increase of only 100 jobs.

Experience with the Air Canada overhaul base has been positive in the 1980s. The UMTI study has not unearthed concerns as to the replacement work for the B-727 overhaul, which will be phased out starting in 1990. However, a firm commitment has not yet been made and the provincial government needs to press for definite assurance and to explore the possibilities for additional expansion. Problems of inadequate training facilities and a long-term trend to reduced maintenance demands from improved aircraft technology have been identified in Chapter 3. A target of 700 jobs is set for the year 2000. This means that an increased proportion of total Air Canada maintenance would be carried out in Winnipeg. Efforts should continue to be made to explore with Air Canada the possibility of locating increased headquarters functions here. Nevertheless, the province must recognize that it already has a large share of this company's employment.

Potentially, there is more scope for attracting increased employment on the part of CAIL - even in spite of this company's recent termination of pilot assignment in Winnipeg. Manitoba needs to attract both administrative functions and an overhaul facility, although recognizing that this latter objective might be achieved in stages with an enlarged maintenance facility preceding a full overhaul base. Current efforts by the province in respect of CAIL have been described in Chapter 3. In particular, the location of a Canadian overhaul base here would reinforce Winnipeg's growing aerospace industry, as described in Chapter 6. The target calls for a CAIL overhaul base in Winnipeg, together with the transfer of other CAIL administrative functions, for an employment impact of 600 jobs.

The objectives and the additional employment needed to reach the target for employment in air transport are stated as follows:

Objective 1 **Achieve the location of a Canadian Airlines International Limited overhaul base and other administrative functions in Manitoba - 600 jobs.**

Objective 2 **Secure increased Air Canada overhaul activity at the Winnipeg base - 200 jobs.**

Objective 3 **Expand Winnipeg's role as a centre for crew assignment and customer service activities - 100 jobs.**

Objective 4 **Ensure that Winnipeg continues to offer locational advantages for the Gemini Airline Reservation System - 100 jobs.**

In a free enterprise economy, there are limits to the extent to which government can influence the location of economic activity. The objectives specified for air transport in Manitoba can only be achieved if the private sector firms in the industry are convinced federal and provincial governments must work together to create the environment in which the private sector will be encouraged to attain the objectives which have been enumerated.

Specifically, this includes the need to:

(i) improve training facilities for aircraft overhaul technicians in the Red River Community College and similar institutions, as inadequate training facilities have been identified as a major problem by the Manitoba air transport industry;

(ii) increase the availability of computer skills in Manitoba needed by "high tech" industries such as Gemini;

(iii) ensure that the labour intensive activities of aircraft overhaul are not impeded by financial burdens, such as payroll tax;

(iv) allow competition in telecommunications, which would result in lower telecommunication costs incurred by the Gemini System and reduce the danger of relocation south of the border, where such charges are already lower;

(v) market Manitoba as a location for air transport activities in terms of:
  - the central location of Winnipeg, which reduces unnecessary aircraft mileage in overhaul operations,
  - the recognized productivity of Manitoba labour in overhaul activities, hopefully soon to be further improved by better training facilities,
  - the synergies, such as ready availability of labour and parts, to be achieved by locating air transport activities in a centre where the aerospace manufacturing industry is also growing strongly;

(vi) utilize, as in many development initiatives, federal and provincial political and financial inducements to achieve the objectives specified.

15.2.3 The Highway Transport Industry

Table 15.3 shows highway transport employment in 1983 and 1989, together with three scenarios for the year 2000. The discussion focuses on the target figures set for the year 2000. Figures are also shown to indicate the outcome if Manitoba were to retain its present share of 6.5% of Canadian employment in highway transport, together with a "no progress" scenario. The employment figures do not include broker-operators, who work on contract for the trucking industry but are not technically employees; these numbered approximately 1,700 in Manitoba in 1989.

Table 15.3: Employment in Highway Transport

	Manitoba thousands	Canada thousands	Manitoba %
Actual 1983	6.5	104.0	6.2
Actual 1989	7.9	121.1	6.5
Forecasts 2000			
No progress	7.7	136.0	5.7
Manitoba % share	8.8	136.0	6.5
Target	9.4	136.0	6.9

The composition of Manitoba's employment in highway transport in 1989 was explained in some detail in Chapter 4. Of the thirteen large interprovincial motor carriers, nine are headquartered in Manitoba. In addition to extensive employment elsewhere in Canada and in the United States, these nine companies provided some 3,700 jobs in Manitoba in 1989, consisting of headquarters, terminal and garage activities and very substantial employment of line haul drivers. Of the remaining 4,200 jobs in highway transport in

1989, some 500 employees were in the intercity bus industry and the balance consisted of employees of intraprovincial motor carriers, household movers, large interprovincial carriers not headquartered in Manitoba, and other interprovincial carriers not large enough to feature in the top thirteen.

Excluding the nine large interprovincial carriers headquartered in Manitoba, employment for the rest of the industry is estimated at 4,500 in the year 2000. Intraprovincial trucking has been in decline. Some of the smaller interprovincial carriers are growing, some declining, but the aggregate of their employment is not likely to change markedly. With the cutback in VIA Rail service, prospects have improved for the intercity bus industry. However, an increase of only 300 jobs is anticipated in highway transport excluding the nine large interprovincial carriers headquartered in Manitoba.

Over the next decade, the Manitoba interprovincial trucking industry will be faced with two major problems. Regulatory reform is expected to reduce the number of firms in the trucking industry. The Manitoba industry could also be adversely affected by the Canada-U.S. Trade Agreement, which will increase north-south traffic, as against east-west traffic. Manitoba has a much lower share of international than of interprovincial traffic. U.S. carriers will also compete more strongly and large Canadian carriers could find advantages in relocating in the United States. Many already have important U.S. operations. Within Canada, there is the attraction of Alberta and this province has a much larger trucking industry than Manitoba, averaging well over 13,000 employees.

For Canada as a whole, a 12% increase in highway transport employment is forecast for the year 2000, but interprovincial and international trucking will increase more than the industry average. If the interprovincial trucking industry were not in a state of flux, the employment provided by the nine firms headquartered in Manitoba would increase to about 4,300 by the year 2000, against 3,700 jobs in 1989. A target for Manitoba to acquire yet one more large interprovincial trucking firm would raise the figure to 4,900.

Adding this to the 4,500 already specified for other trucking activities and the intercity bus industry, the target for the year 2000 is set at 9,400.

The objective which must be attained to achieve the target for employment in Manitoba's highway transport industry is stated as follows (with the numbering proceeding consecutively from the objectives listed under air transport):

Objective 5 **Ensure the continued expansion of the interprovincial trucking industry in Manitoba - 1,200 jobs.**

However, the process of achieving increased employment in interprovincial trucking is not likely to be by persuading an existing carrier to relocate, but rather through ensuring that Manitoba presents the most attractive location for the headquarters of the firms that will emerge victorious from the competition and consolidations of the next few years. Failure to achieve this objective could result in a considerable loss of trucking jobs and employment in the year 2000 could fall below the figure currently recorded for 1989.

The increased employment in highway transport can only be achieved if the private sector firms in the industry are convinced that it is in their economic interest to locate additional activities in the province. Specifically, this requires that the **federal government**:

(i) ensure that the tax burden on trucking is not out of line with U.S. jurisdictions in respect of income tax rates, depreciation write-offs of equipment, and fuel taxes;

(ii) make a federal contribution for improvements to the National Highway System, which has recently been identified by the Roads and Transportation Association of Canada (RTAC) and adopted by the Council of Ministers Responsible for Transportation and Highway Safety.

The next six requirements relate to the **provincial government**. However, it should be recognized that much has been done here in the last two years to improve the operating environment for the trucking industry in Manitoba in respect of matters as Workers Compensation, Autopac, payroll tax on out-of-province drivers and expenditures on highway construction and maintenance. There is still need to;

(iii) give exemption from payroll tax on head office operations of trucking companies in Manitoba;

(iv) extend the recently increased national limits on weights and dimensions beyond that part of the highway system already covered in Manitoba, as roads and structures are upgraded;

(v) continue increased levels of expenditures on highway maintenance and construction;

(vi) continue the high priority presently given to providing four lanes on the remaining 51 kilometres of Highway #75 between Winnipeg and the U.S. border;

(vii) market the advantages offered to the highway transport industry by the central location of Manitoba in terms of convenience in the logistics of truck operations, excellent air services for business travel, optimal communications in the centre of the Canadian time bands, and a highly productive labour force;

(viii) utilize, as in many development initiatives, federal and provincial, political and financial inducements to achieve the objectives specified.

Finally, the **City of Winnipeg**:

(ix) should apply the recently increased national limits on weights and dimensions to the main truck routes within the city.

15.2.4 The Railway Transport Industry

Table 15.4 shows railway transport employment in 1983 and 1989, together with three scenarios for the year 2000. The discussion focuses on the target figure set for the year 2000. Figures are also shown to indicate the outcome if Manitoba were to retain its present share of Canadian employment in rail transport, together with an even worse "no progress" scenario.

Table 15.4: Employment in Railway Transport

	Manitoba thousands	Canada thousands	Manitoba %
Actual 1983	12.4	95.7	12.9
Actual 1989	9.7	73.5	13.2
Forecasts 2000			
No progress	5.7	50.0	11.4
Maintain % share	6.6	50.0	13.2
Target	6.9	50.0	13.8

As explained in Chapter 5, Manitoba had 13.2% of Canadian jobs in railway transport in 1989. The rail industry provided employment of 9,700: 6,200 jobs with CN Rail, 2,900 with CP Rail and 600 jobs with VIA Rail. The CN figure is extremely high because Transcona provides the CN backshopping facility for heavy overhaul of rail cars and locomotives serving the whole of Canada. There is also very substantial employment in the transportation function at Symington Yard. CP has centralized heavy car work for the system in Winnipeg and Calgary and the Weston Shops provide in excess of 800 jobs. CP heavy locomotive maintenance work is in Calgary. VIA Rail was an important employer in Manitoba, but the service cutbacks which took effect on January 15, 1990 have meant the loss of well over 200 jobs.

Putting aside for the moment the CP jobs overhauling rail cars in the Weston Shops and the CN employment in Regional Headquarters in Winnipeg, there were 8,400 railway jobs in Manitoba in 1989. If these were to decline at the rate of 32% forecast for Canada as a whole, they would number only 5,700 by the year 2000. This job loss is virtually inevitable.

However, there are two other important issues. Firstly, the car overhaul activities of CP Rail are split between Calgary and Winnipeg. At present, CP Rail has not indicated any intention to consolidate these activities. However, with improved quality of rail cars and reduced maintenance requirements and in light of the consolidation already completed by CN Rail, it is likely that CP will decide to consolidate this activity in one or other location within the time horizon of our study. Any consolidation of CP car maintenance should be in Winnipeg; this gives the potential for 1,000 jobs in the year 2000 and probably more jobs in the intervening period. Secondly, CN Rail is still operating with a Regional Headquarters in Winnipeg. Any concentration of regional jobs would probably be in Edmonton and it is in Manitoba's interests to avoid the job loss that this would imply.

The two objectives which must attained to achieve the target for employment in Manitoba's railway transport industry are as follows:

Objective 6 **Ensure that any consolidation of CP car maintenance activities takes place in Winnipeg - 1,000 jobs.**

Objective 7 **Avoid any loss of CN administrative jobs to Edmonton - 200 jobs.**

How are these targets to be achieved? Manitoba must ensure that it is an attractive place to do business for the railways and that the historic advantages of Manitoba in railway operations can continue to be exploited, even in a downsizing situation. Employment in the railway industry will still decline very substantially, but at least Manitoba will retain as many jobs as possible, bearing in mind that the railways provide the highest average weekly earnings of all transport modes in Canada.

Perhaps, in the past, railway employment like trucking employment has been rather taken for granted in Manitoba. There has been too little appreciation of the fact that many of the jobs in transport comprise a service export from Manitoba to other parts of Canada. Hopefully, this is changing, but problems still remain. Specifically, there is need to:

(i) maintain a continuing dialogue with the railways to facilitate their maximum input to the Manitoba economy;

(ii) review the provincial diesel fuel tax, to which the railways object vociferously on the grounds that their infrastructure costs are not met from the public purse;

(iii) examine the impact of potential increases in property taxes on railway right-of-way, especially in respect of low density branchlines;

(iv) assess the overall role of rail transport in northern Manitoba, with respect to the railway view that there is presently inadequate traffic in northern Manitoba for the levels of rail and highway transport currently provided.

15.2.5 The Transport Service Industries

The employment targets for the air, highway and railway modes are now brought together with the other sectors of the transport services. Manitoba employment in urban transit, highway and bridge maintenance and "other" activities is essentially to serve the local market. The forecasts of the Manitoba economy in Chapter 11 suggested that the Manitoba share of Canadian population will fall from 4.1% in 1989 to 3.9% in the year 2000. The 1989 Manitoba shares of Canadian employment in urban transit, highway and bridge maintenance and "other" transport are decreased accordingly.

Table 15.5 consolidates the targets for the year 2000 and shows the outcomes on the two other scenarios.

Table 15.5: Target Employment in Transport Services - Manitoba

thousands

	1983	1989	No progress 2000	Maintain % share 2000	Target 2000
Air	3.0	3.6	4.2	4.8	5.2
Highway	6.5	7.9	7.7	8.8	9.4
Railway	12.4	9.7	5.7	6.6	6.9
Urban	1.3	1.4	1.5	1.6	1.5
Highway mtce	3.5	3.4	3.4	3.6	3.4
Other	2.4	2.5	2.4	2.5	2.4
Total	29.1	28.5	24.9	27.9	28.8
Manitoba share of Canadian total - %					
	6.3	6.1	5.1	5.7	5.9

The targets established for the year 2000 will not be easy to attain - quite apart from postulating no loss in present activities, the requirements include the establishment of an overhaul base by CAIL, an expansion in the Air Canada overhaul base, an increase in the proportion of motor carrier employment in Manitoba, and the consolidation of CP car overhaul activities in Winnipeg. This is a formidable list and the establishment of higher targets would not be realistic.

Employment in the transport service industries for Canada as a whole is only expected to rise by a modest 4% to the year 2000; the target increase for Manitoba is only 1%. The problem is Manitoba's heavy commitment to employment in railway transport and the strong downward trend in employment in this industry. It is extremely difficult to make up this loss of jobs.

15.3 EMPLOYMENT TARGETS FOR TRANSPORT EQUIPMENT MANUFACTURING

This section establishes targets for Manitoba employment in transport equipment manufacturing. The discussion starts with projections of national employment for Canada as a whole in the year 2000. These projections are used as a basis for the Manitoba targets in the second part of the section.

15.3.1 National Projections

Table 15.6 shows past data and forecasts of Canadian employment in transport equipment manufacturing.

The transport equipment manufacturing industries were examined in the present study on the grounds that Manitoba's importance in the transport service industries could also attract production facilities to manufacture transport equipment. In fact, this has eventuated to only a modest extent, because Manitoba has a negligible share of the motor vehicles and the motor vehicle parts and accessories sectors. This lack of employment is so fundamental that, short of a collapse in these industries, the production of accurate forecasts in Table 15.6 is only of secondary importance to the present study.

Table 15.6: Employment in Transport Equipment Manufacturing - Canada

thousands

	1971	1976	1981	1986	1989	Forecast 2000
Aircraft and parts	23.8	21.2	39.0	38.4	44.3	53.0
Motor vehicles	42.3	47.1	44.3	53.5	52.5	53.0
Motor vehicle parts and accessories	43.8	47.3	49.3	85.2	74.4	75.0
Truck bodies and trailers	12.1	16.2	13.1	13.0	21.1	23.0
Railroad rolling stock	6.4	8.6	10.4	7.4	7.5	7.0
Other	21.8	21.8	22.5	16.8	20.0	20.0
Total	150.2	162.2	178.6	214.3	219.8	231.0

Source: 1986 and previous years from SC 31-203, 1989 from SC 72-002 and not completely comparable, UMTI forecast for the year 2000. Other includes shipbuilding and boatbuilding.

Canadian employment in the motor vehicle industry has increased by an average of over 500 jobs per annum since 1971, but employment has fluctuated considerably. The industry is in difficulties, as of early 1990. Technical improvements in the industry, as outlined earlier in Chapter 13, and the competition of imports suggest that the manufacture of motor vehicles will not be particularly buoyant during the next decade. The forecast for the year 2000 is therefore made at the employment level actually achieved in 1989. The motor vehicle parts and accessories industry has also been subject to fluctuations in employment. The massive increase between 1981 and 1986 was real, but possibly exaggerated by statistical re-definition. The industry is currently depressed and, for the same reasons as given for motor vehicles, it is assumed that employment will not increase over the next decade.

The manufacture of aircraft and aircraft parts showed stability in employment in the first part of the 1970s, a large increase between 1976 and 1981 and then stability again in the first half of the 1980s. Employment has again increased in the last two years. Detailed examination of the Canadian aerospace industry is beyond the scope of the present study and the employment forecast for the year 2000 is therefore approximate.

Employment in the truck bodies and trailers industry has fluctuated considerably, with no clear trend. The figure shown in Table 15.6 for 1989 comes from a different statistical source from that for other years and there is clearly a problem of lack of statistical continuity. In principle, bus manufacturers should benefit from an anticipated reduction in rail services, but the markets are North American rather than Canadian and the industry has considerable over-capacity. With the aging population, the demand for mobile homes is expected to increase, but this has materialized less rapidly than expected. In light of these considerations, only a modest expansion is anticipated in the truck bodies and trailers sector.

The manufacture of railroad rolling stock has been depressed through the 1980s and there is no expectation of long-term growth in this industry. Other transport equipment manufacturing is primarily shipbuilding and boatbuilding and this has not been buoyant in recent years.

The conclusion from these forecasts is that Canadian employment in transport equipment manufacturing is not likely to increase much in the 1990s. This is disappointing, as the employment increase in transport equipment manufacturing averaged 3,900 jobs per annum in the period from 1971 to 1989. The forecast of low growth to the year 2000 mainly reflects poor prospects in motor vehicles and associated parts and accessories.

15.3.2 Manitoba Projections

Table 15.7 shows transport equipment manufacturing in Manitoba in 1981 and 1989, together with three scenarios for the year 2000. The discussion focuses on the target figures set for the year 2000. The table also shows what would happen if Manitoba were to maintain its 1989 shares of each sector of transport equipment manufacturing. The Manitoba share of the total industry at 3.5% in the year 2000 would still be higher than the figure of 3.2% in 1989. This is because the most rapidly expanding sector of the industry is expected to be the manufacture of aircraft and aircraft parts, where Manitoba has a large share of national employment. A "no progress" scenario is also shown.

Table 15.7: Target Employment in Transport Equipment Manufacturing - Manitoba

thousands

	1981	1989	No progress 2000	Maintain % share 2000	Target 2000
Aircraft and parts	2.6	3.6	3.6	4.3	5.6
Motor vehicles	n/a	0.2	0.2	0.2	0.2
Motor vehicle parts and accessories	0.5	0.6	0.6	0.6	1.6
Truck bodies and trailers	2.2	1.9	1.9	2.2	2.5
Railroad rolling stock	n/a	0.4	0.4	0.4	0.4
Other	n/a	0.3	0.3	0.3	0.3
Total	6.4	7.0	7.0	8.0	10.6
Manitoba share of Canadian total - %					
	3.6	3.2	3.0	3.5	4.6

The transport equipment manufacturing industries in Manitoba were examined in Chapter 6 and future technological developments were reviewed in Chapter 13. To place future developments in context, it is useful to present again the sub-section on specific opportunities presented in Chapter 13 from the report prepared by R.S. Wallace and Associates on this subject.

> Promising areas for the manufacture of new technology transportation equipment are primarily in vehicle parts and components, not in entire vehicles. A summary of specific opportunities/non-opportunities follows. However, it should again be noted that most transport equipment manufacturing opportunities lie in attracting industry seeking to expand from obsolete production plants located elsewhere, rather than in discontinuous quantum leaps in transport technology used in the manufacturing process.
>
> 1. Aircraft components manufacturing, overhaul and repair are currently the most successful transport equipment manufacturing activities in Manitoba and offer the best opportunities for the foreseeable future.
>
> Particularly promising areas are: total aircraft overhaul, engine component manufacturing and overhaul, manufacture and stuffing of aircraft sections, and expansion in component manufacturing using composite materials.
>
> 2. Bus and recreational vehicle manufacturing are the second most successful manufacturing businesses. For bus manufacturing a major cloud on the future is the severe overcapacity of production facilities in North America. The conservative approach of purchasers requires proven, reliable technology, but this does not necessarily inhibit technological innovation. Nevertheless, the industry is likely to have a steady but not highly profitable and innovative future market.
>
> Recreational vehicles have a strong future, growing from a small slowly expanding market base. Tariff protection for Canadian producers will disappear when Free Trade is fully implemented and this will force the industry to become more cost competitive.
>
> 3. Automotive parts ranked rather lowly in the evaluation of opportunities. This was due to several factors, among which were:
>
> - The lack of a strong auto parts manufacturing base in Manitoba.

- Auto manufacturers are reluctant to use unproven manufacturers of new parts. Reportedly the Japanese firms demand a minimum of three years good record before purchasing from a supplier.

- The "just-in-time" concept of having parts suppliers located within four hours delivery time or a 300 km radius of their assembly plant. The auto industry hence prefers to use parts manufacturers located in Southern Ontario.

However, despite the above obstacles, the potential for high value, good quality jobs in the industry is so great that every effort should be made to bring it to Manitoba. Magna International has established an engine component manufacturing plant in Nova Scotia. The Winnipeg region is more favourably located to the Detroit/ Windsor area than is Nova Scotia. Hence, the geographical handicap can be overcome using supplier stocked warehousing next to assembly plants, and/or air/truck delivery of parts direct to plants. Winnipeg is within 24 hours trucking time of Windsor and only a few hours by air.

4. **Truck manufacturing** does not have a bright future in Canada due to overcapacity in the North American market. Further, rationalization of the industry on an international scale is currently taking place. Hence, opportunity is limited for attracting manufacturers of truck components to constructing modern plants in Manitoba to replace obsolete capacity facilities located elsewhere.

There is a substantial business in Manitoba manufacturing truck trailers. Given the large Manitoba interprovincial trucking industry there will be opportunities for increased manufacture of trailers. The technologies required are well established and hence this industry does not offer new opportunities. However, there are opportunities for expanding existing production.

5. **Railway vehicles** have no large manufacturing base in Manitoba, apart from work carried out in-house by CN Rail and CP Rail. Consequently, there is little prospect of creating one. It is not a fast changing industry and hence is not a good prospect for manufacturing based on new technologies. One exception is the adaption of motor vehicle/aircraft GPS/Loran 'C' position location equipment to trains.

6. **Roadways** have no identified base, and are not recommended as a strong focus.

> Manitobans have achieved great successes in their transport equipment manufacturing industries, but not in proportion to their population size. With some 4.1% of the nation's population, the province has 3.2% of the transport equipment industry's employment. Its value added content exceeds the national average by a significant margin. Further its labour force is well disciplined, trained, educated, productive and less costly than the average for Canada. This combination of positive factors should result in Manitoba capturing a larger than proportional share of the industry.
>
> The first step in correcting this anomaly could be a thorough examination of why some previous opportunities died. This examination should cover such areas as: cost competitiveness, availability of required skills, tax structures and labour regulations that could discourage new industries. Finally the province must find an effective way to ensure the federal government permits it to compete fairly for major national projects. The establishment in late 1989 of a Manitoba office in Ottawa could provide the avenue to deal with the problem.

The Manitoba objectives in transport equipment manufacturing are clear - ensure continued momentum in the manufacture of aircraft and aircraft parts; obtain increased representation in the manufacture of motor vehicle parts and accessories; continue support of the bus industry, although recognizing the limited scope for employment increase here; and seek increased activity in mobile home manufacturing, recognizing that this can be a growth sector with the increased representation of older people in the Canadian population.

The directions of growth and the means of attainment have been listed in the discussion of technological developments in Chapter 13, which forms a bare bones summary of the much longer study undertaken in this area by R.S. Wallace and Associates. However, even the longer study does not give precise plans detailing, for example, how to obtain a motor vehicle manufacturer for Manitoba in terms of which company and which line of product should be targeted. This would involve extensive industry search, which is beyond the terms of reference and not, in any event, appropriate in a document prepared for public release.

Aircraft and aircraft parts manufacturing is a very buoyant sector of the Manitoba economy. Winnipeg is the third largest aerospace manufacturing centre in Canada; the Winnipeg industry has now reached critical mass size, allowing external economies of scale and providing an adequate base for future expansion; Bristol Aerospace and Boeing each have well over 1,000 employees and there are only two other manufacturing firms in the whole of Manitoba of this size; Boeing's parent, headquartered in Seattle, is currently faced with a very heavy demand for planes and a long waiting list for deliveries; the Manitoba industry is further enhanced by the Air Canada overhaul base, which is included in air transport and not in the statistics of manufacturing employment; and, if CAIL could be persuaded to establish a base here, as discussed in the previous section, this would give further impetus to the industry.

Manitoba's share of Canada's aerospace industry increased to 8.1% in 1989, against 6.6% in 1981. Recent experience has been impressive in the major Manitoba firms and, on October 13, 1989, it was also announced that Hughes Aircraft Company is to develop in Winnipeg a monitoring system for diagnosing engine noise in aircraft. The target assumes a Manitoba share of the overall Canadian industry at 10.5% in the year 2000, for an employment figure of 5,600.

It is not expected that Manitoba will secure the location of a motor vehicle manufacturer, but prospects are better for motor vehicle parts and accessories. This sector has already been pursued by the province for perhaps two decades and success is not likely to come easily. However, it is an uphill battle in transport equipment manufacturing if the province is almost locked out of the motor vehicle and associated parts and accessories sectors, which provide some three-fifths of total employment. The targeted increase for new establishments in motor vehicle parts and accessories is set at 1,000 jobs and this would mean a requirement for two or three establishments. This target cannot be achieved without cooperative action by the federal and provincial governments; action is needed, rather than a litany of reasons of why the manufacture of motor vehicle parts and accessories is not economically feasible in Manitoba - but feasible in Nova Scotia!

The main Manitoba employment in truck bodies is in buses and mobile homes. The bus industry is extremely important, with Motor Coach Industries ranked as one of the four Manitoba manufacturing firms providing over 1,000 jobs. However, given problems of over-capacity in the bus industry in North America and the lack of success of the recent federal-provincial urban bus program in Manitoba, it is difficult to expect more than modest growth in bus employment. The mobile home industry has more potential.

Prospects for increasing Manitoba employment in railroad rolling stock and in "other" activities, mainly boatbuilding, are not good and little growth is expected here.

The objectives which must be obtained to achieve the target for employment in Manitoba's transport equipment industries are as follows:

Objective 8 Ensure the continued growth of the aircraft and parts manufacturing industry - 2,000 jobs.

Objective 9 Attract the location of plants manufacturing motor vehicle parts and accessories - 1,000 jobs.

Objective 10 Ensure the continued development of bus and mobile home manufacturing - 600 jobs.

How are these targets to be achieved? It has already been pointed out that, in a free economy, there are limits on the extent to which government can influence the location of economic activity. The objectives specified for transport equipment manufacturing in Manitoba can only be achieved if the private sector firms in the industry are convinced that it is in their economic interest to locate additional activities in the province. Increased transport equipment manufacturing is consistent with federal government objectives to increase economic activity in low growth areas. The Manitoba Department of Industry, Trade and Tourism has already identified the transport equipment industry, particularly aerospace manufacturing, as a prime growth area. The two governments must work together to create the environment in which the private sector will be encouraged to attain the objectives which have been enumerated.

In respect of the manufacture of aircraft and aircraft parts, this includes the need to:

(i) expand the range of aeronautical training courses available in Manitoba, where requirements were expressed by industry in the areas of robotics, computer programming and control, and aircraft repair and maintenance;

(ii) ensure that the Manitoba aerospace industry obtains an adequate share of federal government contracts - although the loss of the CF-18 contract in late 1986 is still a source of resentment, Manitoba must follow the example set by Bristol Aerospace and look to the future rather than to the past;

(iii) continue to market on a world-wide scale the attractions of Manitoba for aircraft overhaul and manufacture, stressing the convenience of the central location in Canada, the uncluttered airspace of Manitoba, the high quality of labour and the relative unimportance of transport costs in aerospace manufacturing.

In respect of the manufacture of motor vehicle parts and accessories, successful exploitation of this industry on any substantial scale has eluded the province for very many years. The Manitoba disadvantage as against locations nearer to the Detroit/Windsor axis has probably diminished over the years with improvements in transport delivery times. The main need here is:

(iv) a firm commitment of federal and provincial governments to ensure the location of plants in Manitoba to manufacture motor vehicle parts and accessories.

The objective for increased employment in bus and mobile home manufacture is fairly modest. No specific activity is stated, other than continued liaison with the industry to ensure that ongoing problems are addressed.

15.4 TRANSPORT SERVICE IMPLICATIONS

As a general statement, it is believed that lack of government action in the transportation area would have less dire consequences on the quality of services and rates, offered to passengers and freight shippers and receivers in Manitoba, than would government inaction on employment in the transport service and transport equipment manufacturing industries. The concern on employment is mainly in Winnipeg - in 1989, roughly 75% of Manitoba's transport service jobs and 90% of transport equipment manufacturing jobs were in Winnipeg. Quality of service can be a more important concern outside Winnipeg.

15.4.1 Passenger Transport

The quality of air service between Winnipeg and other parts of Canada is highly rated by users and only minimal monitoring by the province is necessary over the next decade. In transborder services, closer integration of the U.S. and Canadian economies following the Canada-U.S. Trade Agreement may increase pressures for Winnipeg to become a spoke to the Minneapolis hub. On the other hand, increased north-south air passenger traffic volume could open up opportunities for new routes between Winnipeg and U.S. cities. Manitoba must also continue to press for a resumption of direct air services between Winnipeg and European cities. The Air Canada announcement of twice-weekly service between Winnipeg and London for the summer of 1990 is via Ottawa rather than by the polar route, but this is at least a step in the right direction.

Two ongoing concerns were raised in respect of air service within Manitoba. Complaints about high air fares were very frequent during the course of the UMTI interviews in the north. A detailed examination of fare structures in relation to costs is beyond the terms of reference of the present study and UMTI is unable to comment on the extent to which the complaints are justified. The 1987 National Transportation Act relies on competition rather than regulation to determine fare levels in transport modes, but it recognizes that air markets in the north are fragile and that reliance on competition alone may not be enough. Nevertheless, over the last three years, the regulatory body has tended to leave air services and air fares in the north to the operation of competitive market forces. It is a legal requirement that any formal complaint to the Agency has to be brought by northern residents rather than by the province. The complaints in respect of air fares in northern Manitoba were widespread; the province has already attempted to assist northern residents to ask for investigation of these fares by the National Transportation Agency and these efforts to act as a catalyst should continue.

The second concern was the level of air service to Brandon. A brief history of this service is given in the study; the short distance between Brandon and Winnipeg inhibits the provision of commuter air service while, on transcontinental travel, Brandon has suffered from being a spoke to the Winnipeg hub. From interviews with civic and business leaders in Brandon, inadequate air service appeared to be the major transportation concern there and the Brandon community leaders considered that this was a serious hindrance to economic development. Perhaps there is need for an in-depth examination of the extent to which Brandon's economic development is impeded by inadequate air services. However, corrective action could be difficult in view of extremely limited prospects for any subsidy assistance.

15.4.2 Freight Transport

From the interviews with users of freight transport in Manitoba, UMTI concluded that the rail freight rate issue was no longer in the centre stage position which it had occupied for so long in the history of the province. The reasons were summarized in Chapter 9.

> As a general conclusion to Chapters 7 to 9, it would seem that the goods producing industries of Manitoba are no longer so heavily concerned with problems of transportation and freight rates. In many ways, this is a surprising conclusion in view of the centre stage position occupied by transportation for so many years in the history of the province. As has been shown in Chapters 7 and 8, transport costs are often not too large a proportion of product selling price and, where the burden is great, there are often good reasons in the nature of the product.

In a review of an earlier draft of this part of the study, the Manitoba Department of Industry, Trade and Tourism indicated a general agreement with this conclusion, stating that "the system is operating efficiently and does not appear to be a major impediment in the operation and/or enhancement of our manufacturing sector". This was not the case even twenty years ago and the improvement has occurred as a result of increased reliance on trucking by Manitoba manufacturers, heavy competition within the trucking industry, greater truck-rail competition, and increased recognition by the railways of their customer needs.

In the past, the Manitoba government has been very active in analysis of the overall freight rate structure faced by the province, the freight rates likely to be incurred by new manufacturing firms locating here, and the rates and general transport and logistical problems faced by existing manufacturers. In part, it is the success of these activities that has allowed the improvements of the last decade. The transportation situation will continue to be fluid over the next few years with the closer integration of the U.S. and Canadian economies, increased competition from U.S. trucking companies, and duopoly in both the air and rail modes. The need for provincial monitoring will continue.

15.4.3 Transport Policy Issues

This section notes several other transport issues requiring attention over the next few years.

(a) If the Western Grain Transportation Act is converted to a "pay the producer" basis, this would increase the amount of grain transported by road and hence road maintenance costs. The question arises of compensation to the province from the federal government for road costs incurred as a result of changing to "pay the producer".

(b) If the remote services of VIA Rail should be reduced in Manitoba, this would save money for the federal government without any necessary sharing of the savings with the province. Manitoba would need offsets in the form of increased federal assistance for northern transportation.

(c) The Port of Churchill will continue to need attention.

15.5 SUMMARY

1. The employment targets in the present chapter are summarized in Table 15.8. The Canadian figures for the year 2000 are the same under all scenarios. The table also shows the expected outcome if Manitoba were to maintain its 1989 share of each individual transport service and transport equipment manufacturing sector, together with a "no progress" scenario also outlined in the chapter.

For Canada as a whole, only modest growth is expected in the transport service industries and in transport equipment manufacturing in the 1990s. In transport services, this reflects the slow growth evident for several decades. Transport equipment manufacturing has been much more buoyant in the last twenty years than the forecast for the year 2000. This is because of the assumption that there will be little growth in motor vehicles and associated parts and accessories, which account for nearly three-fifths of Canadian transport equipment employment.

Table 15.8: Summary of Manitoba Target Employment in Transportation

	1989	No progress 2000	Maintain % share 2000	Target 2000
Canada - thousands				
Transport services	469.1	488.0	488.0	488.0
Transport equipment	219.8	231.0	231.0	231.0
Total	688.9	719.0	719.0	719.0
Manitoba - thousands				
Transport services	28.5	24.9	27.9	28.8
Transport equipment	7.0	7.0	8.0	10.6
Total	35.5	31.9	35.9	39.4
Manitoba Share-%				
Transport services	6.1	5.1	5.7	5.9
Transport equipment	3.2	3.0	3.5	4.6
Total	5.2	4.4	5.0	5.5

The targets for Manitoba employment in transport services and transport equipment manufacturing amount to 39,400 jobs in the year 2000, as against 35,500 in 1989. This would increase Manitoba's share of total Canadian employment in these industries from 5.2% in 1989 to 5.5% in the year 2000. In transport services, Manitoba employment in the year 2000 would be slightly less than it is today. This is due to the dragging effect of Manitoba's large share of railway activity. The increase in Manitoba employment in Table 15.8 therefore relies entirely on transport equipment manufacturing.

2. Three chapters of the study deal with general transportation matters and they are reviewed in section 1. The general thrust is the action needed to establish the economic environment which will allow a healthy transportation industry to flourish in Manitoba. There must be recognition of the large impact of declining railway employment on

Manitoba; the effects of transport regulatory changes and free trade on the trucking industry; and the requirement for a long-term viable role for the Port of Churchill. Procurement expenditures by the federal and provincial governments should have maximum impact on the transportation industries of Manitoba. Taxation policies must not be allowed to react unfavourably on the transportation industries.

3. In air transport, many of the of activities carried out in Manitoba are not necessarily tied to the province, with most of this "footloose" employment presently provided by Air Canada. Employment in the air transport industry in Manitoba was 3,600 in 1989 and the target for the year 2000 is set at 5,200. Of the increase of 1,600, some 600 jobs should be secured from the growth in the industry on a national basis and the effects of this on employment tied to Manitoba. Considerable effort will have to be made to obtain the other 1,000 jobs. Some of this growth could be obtained from increased crew assignment at Winnipeg and from increased activity in computer and reservation systems serving out-of-province travellers. However, the main thrust for increased employment in the air mode must rest on persuading Canadian Airlines International Limited to locate an overhaul base here and on a possible expansion of the present Air Canada overhaul base.

4. In highway transport, great fluidity has been introduced into the interprovincial motor carrier industry as a result of regulatory reform. The future effects of the Canada-U.S. Trade Agreement will be to substitute north-south traffic movements for east-west, in other words to substitute international traffic where Manitoba is relatively weak for interprovincial traffic where Manitoba is extremely strong. Target employment for Manitoba in the highway transport industry is set at 9,400 for the year 2000, against an actual figure of 7,900 in 1989.

5. Railway employment has been declining rapidly in Canada for many years, especially in the 1980s, and this will continue to the year 2000 and beyond. Railway employment in Manitoba numbered 9,700 in 1989 and, because of the heavy decline expected on a

nationwide basis, the target for the year 2000 is only 6,900. To prevent the decline from being even more severe, two objectives must be met. Firstly, Manitoba must not lose any of its present railway activities. Secondly, speculating that CP may not continue its division of heavy car maintenance between Winnipeg and Calgary, it is essential that the location for this function should be Winnipeg.

6. The remaining transport service sectors are urban transit, highway and bridge maintenance and a large miscellaneous category, ranging from taxicabs to parking lot attendants. Future employment in these sectors has not been analyzed, as employment depends upon local activity in the Manitoba economy and there is no scope for Manitoba to "export" services to other provinces, as occurs in the air, highway and rail modes.

7. The employment target for transport equipment manufacturing in Manitoba is 10,600 jobs in the year 2000 against 7,000 in 1989. This would increase Manitoba's share of Canadian employment from 3.2% to 4.6%. Of the additional 3,600 jobs, 2,000 are targeted for the aerospace industry. A further 1,000 jobs are in the motor vehicle parts and accessories sector, with full recognition that this will not be achieved without a determined combined effort by the federal and provincial governments. The remaining increase in employment is targeted for truck bodies and trailers, with the growth assigned mainly to mobile recreational home manufacture, where the aging population is expected to increase demand.

8. Air passenger transport between Winnipeg and other major Canadian cities is of high quality. A continuing monitoring role is necessary by the provincial government, but this should not prove too onerous. In transborder air services, there will be increasing pressures over the next decade for Winnipeg to become a spoke of the Minneapolis hub. Provincial lobbying must continue for direct flights between Winnipeg and European cities. Problem areas identified in the study appear to be northern air fares and air services at Brandon.

9. The rail freight rate issue is no longer in centre stage position in Manitoba. Nevertheless, it is recommended that the province continue its long-established monitoring program in this area, its informal mediation process between shippers and carriers, and the counselling service which it has provided to industry on problems of transportation and general logistics.

The recommendations and discussion of this chapter conclude the development of the Manitoba Transportation Action Plan to the Year 2000. Achievement of the targets specified would convert Manitoba from a province with a declining share of overall transportation activities to a province with an increasing share of these activities. This is compatible with policies for economic development in all the regions in Canada, especially in provinces like Manitoba which have been growing less rapidly than the country as a whole.

The governments already have in place the mechanisms necessary to achieve the objectives - Transport Canada and Western Economic Diversification at the federal level and Highways and Transportation and Industry, Trade and Tourism at the provincial level. However, democratic societies rely mainly on the free operation of market forces; governments do not have the power to direct industry in respect of the location of activities. The two levels of government must ensure that Manitoba is an attractive location for the transport service and the transport equipment manufacturing industries. They will have to work with a variety of groups, including municipalities, local economic development corporations and organized labour. But, most of all, they will have to work closely with the private sector to achieve successful implementation of the objectives specified.

LIST OF RECOMMENDATIONS

1. General Recommendations

Chapter 2:

1. The federal government should:

(a) recognize that Manitoba's large commitment to railway transport, where employment is inevitably declining, implies a heavy burden and assist in establishing offsetting employment opportunities in other economic activities;

(b) develop strategies, in conjunction with the province, for a long-term viable role for the Port of Churchill, appreciating that, in addition to an export grain movement, this involves wider issues such as defence, sovereignty and northern development.

2. The provincial government should:

(a) ensure an attractive environment in Manitoba for the transport service sectors, with this relating to a variety of issues ranging from training to taxation;

(b) recognize that much of Manitoba's employment in transport is to service demand from elsewhere in Canada and that this outside demand contributes over 10,000 jobs to the province.

Chapter 10:

1. The federal government should:

(a) ensure that federal procurement expenditures have maximum impact on the development of the transport service and transport equipment manufacturing industries in Manitoba.

2. The provincial government should:

(a) bring provincial needs forcefully to the attention of the federal government so that procurement expenditures by all levels of government have the maximum impact on the transport service and transport equipment manufacturing industries of Manitoba;

(b) make sure that Manitoba is tax competitive with competing jurisdictions and, as soon as possible, eliminate the payroll tax.

2. Air Transport

Chapter 3:

The provincial government should:

(a) take action to make Manitoba a centre of excellence in the training of professionals and technicians for the air transport and aerospace manufacturing industries;

(b) ensure that, as the Boeing 727 is withdrawn from the Air Canada fleet, there will be a smooth transfer to A320 heavy maintenance at the Air Canada Winnipeg Overhaul Base and see whether it could be possible to locate any other Air Canada system wide functions in Manitoba;

(c) seek a greater Canadian Airlines International Limited presence in Winnipeg, with particular reference to an overhaul base;

(d) allow competition in the provision of telecommunication to minimize telecommunication costs incurred by the Gemini Airline Reservation System and reduce any danger of re-location south of the border where such costs are lower.

3. Highway Transport

Chapter 4:

1. The federal government should:

(a) ensure that federal taxes do not penalize the Canadian trucking industry vis-a-vis U.S. carriers, with specific reference to corporate taxation, depreciation allowances and fuel taxes;

(b) make a contribution for improvements to the National Highway System, which has recently been identified by the Roads and Transportation Association of Canada (RTAC) and adopted by the Council of Ministers Responsible for Transportation and Highway Safety;

(c) compensate the losers from the abandonment of grain dependent railway branchlines, including the road authorities whose costs are increased, in the same way as provisions are contained for other branchlines under section 175 of the National Transportation Act.

2. The provincial government should:

(a) recognize, within the budgetary constraints of the province, that the payroll tax is particularly resented and that this tax on headquarters operations of interprovincial motor carriers increases the cost of doing business in Manitoba;

(b) extend RTAC limits on weights and dimensions to other highways in the province, as roads and structures are upgraded;

(c) take a pro-active role to ensure that Manitoba's participation in the motor carrier industry is not adversely affected by the consolidation of carriers expected to result from deregulation;

(d) ensure adequate expenditures on highway maintenance and construction in Manitoba, continuing to give high priority to providing four lanes on Highway #75 between Winnipeg and the U.S. boundary;

(e) continue the Manitoba initiative of a joint provincial endeavour to obtain federal funding for the National Highway System;

(f) continue to press the federal government for compensation in respect of increased highway costs caused by branchline abandonment;

(g) develop a rationalization plan for the intraprovincial trucking industry.

3. The City of Winnipeg should:

(a) comply with the new RTAC standards on the main truck routes within the city.

4. Railway Transport

Chapter 5:

1. The federal government should:

(a) ensure that, if the Western Grain Transportation Act is changed to a "pay the producer" basis, amendments will also be created so that the competitive response of the railways will not be inhibited by such requirements as time delays in introducing reduced rates to meet competitive circumstances;

(b) examine the overall future of rail transportation in northern Manitoba, working with the provincial government and recognizing that CN may need direct subsidy assistance to continue operating this service.

2. The provincial government should:

(a) determine whether it is in the interests of the province to continue burdens on the railways in such areas as payroll tax, diesel fuel tax and increased property taxes on railway right-of-way;

(b) examine all opportunities to increase CP Rail's car and locomotive heavy overhaul activity in Winnipeg.

5. Transport Equipment Manufacturing

Chapter 6:

1. The federal government should:

(a) assist Manitoba to obtain a significant presence in the manufacture of automobile parts;

(b) ensure that the development of the aerospace industry in Manitoba is a prime objective of the Western Diversification Office and that the needs of this industry are adequately considered in the awarding of government defence contracts;

(c) assist the transport equipment industries to find new markets, specifically in the context of the Canada-U.S. Trade Agreement and the effects of "Buy America" policies.

2. The provincial government should:

(a) continue its attempts to achieve a significant Manitoba presence in automobile parts manufacturing;

(b) take action to make Manitoba a centre of excellence in the training of professionals and technicians for the air transport and aerospace manufacturing industries;

(c) work with the bus and recreational vehicle industries to ensure their continued growth in the province;

(d) continue an active lobbying role in respect of the awarding of government defence contracts, pursuing this at the present time as representing a partial offset to the employment losses of military bases now being closed in the province;

(e) maximize the local sourcing of supplies by establishments in the transport equipment industries.

6. Transport Users

Chapter 9:

1. The federal government should:

(a) continue its present studies through the National Transportation Agency to determine whether the WGTA rate scale discriminates against Manitoba shippers and eliminate such discrimination as may be found;

(b) ensure, through the monitoring process carried out by the National Transportation Agency, that the quality of rail transport is adequate to meet the needs of shippers and receivers in Manitoba;

(c) take action to ensure that regional development initiatives are not unduly hindered by inadequate air service to non-metropolitan centres such as Brandon;

(d) assist Manitoba to obtain improved overseas and transborder air services, as part of the continuing bilateral air service negotiations.

2. The provincial government should:

(a) continue its role in transportation policy analysis and its monitoring of the transportation industries;

(b) continue its programs of assisting Manitoba industries to improve logistics and transportation management;

(c) work with the railways to resolve problems raised by Manitoba manufacturing industries, recognizing that the rail mode is still the most important transport mode for one-fifth of Manitoba's manufacturing industries;

(d) encourage the communities of northern Manitoba to bring their complaints on air fares to the attention of the National Transportation Agency;

(e) continue to explore the potential for improved air services for Manitoba, particularly transborder services and direct flights between Winnipeg and Europe.

APPENDIX 1: TERMS OF REFERENCE

TIDAC (Transportation Industry Development Advisory Committee) has been requested to outline an action plan to the year 2000 that is designed to maintain and enhance Manitoba's role as a transportation manufacturing and distribution centre. UMTI (University of Manitoba Transport Institute) is proposing to assist TIDAC in developing such as action plan in the following ways:

1. review and assess previous reports and studies relating to the role of transport in Manitoba's economic growth.
2. identify knowledge gaps related to No. 1, and where possible, undertake studies to fill these gaps
3. advise and assist TIDAC in the articulation of the action plan.

Approach

This work can be divided into 3 phases.

Phase I Current Circumstances

The dimensions of Manitoba as a transportation centre will be defined using existing information sources by the following procedure:

i) the framework policies that are particularly relevant to Manitoba's transportation industry will be examined and the sensitivities of Manitoba to framework policies will be described

ii) the structure of the Manitoba transportation industry will be described in terms of its major goods and service components

iii) the linkages to other sectors of the Manitoba economy will be identified with emphases on those sectors which are sensitive to changes in the performance of the transportation sector.

Phase II **Transportation Analysis**

The analysis of Manitoba as a transportation sector will identify the critical factors that enhance or detract from economic performance of the industry.

i) alternative scenarios for future performance of the transportation sector will be developed

ii) each scenario will be analyzed taking into account the structure and sensitivities of the industry identified in Phase I.

iii) consultation with key stakeholders in government, industry and labour will be undertaken to determine their perceptions of the implications of each of these scenarios.

Phase III **Transportation Strategy**

A strategy to enhance Manitoba's position as a transportation centre will be developed based on circumstances and analytical results elaborated in Phase I and Phase II:

i) objectives for the transportation industry will be developed

ii) general targets for future framework of the industry will be proposed

iii) the relevancy of current policies and programs will be described

iv) policy and program adjustments will be suggested

v) implications for governments, industry and labour will be described.

APPENDIX 2: LIST OF PERSONS AND ORGANIZATIONS CONSULTED

TIDAC

Mr. Jim Campbell*
Mr. Al Cerilli*
Mr. John Fehr
Mr. Reg Forbes
Mr. Ron Johnson
Mr. Roland M. Painchaud
Mr. Marshall E. Rothstein, Q.C.
Mr. R. Ross Smith

Mr. Don McCarthy, Q.C., Executive Secretary

* Formerly TIDAC members.

TRANSPORT CANADA

Winnipeg

Mr. G. Elliott, Manager, Winnipeg International Airport
Mr. Gordon MacMichael, Acting Regional Director, Policy and Co-ordination
Ms. Sandra Stoddart, formerly Regional Director, Policy and Co-ordination

Ottawa

Mr. M. Brennan, Associate Asst. Deputy Minister, Policy and Co-ordination
Mr. S. Tom Byerley, Director, Strategic Planning
Mr. J.E. Campbell, Director, Multi-Modal Transportation Policy
Mr. A. Pageot, Director General, Economic Analysis

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION AND WESTERN DIVERSIFICATION OFFICE

Winnipeg

Mr. Barry Brickman, WDO
Mr. Daryl Miller, Acting Assistant Deputy Minister, WDO
Mr. Bob Stalker, Director, Planning and Analyses, DRIE

Ottawa, Surface Transportation and Machinery Branch

Mr. J. Gieysztor, Automotive Corporative Development Division
Mr. A. Duff Mitchell, Automotive Corporative Development Division
Mr. M.B.P. Watson, Manager, Urban and Rail Systems

MANITOBA DEPARTMENT OF ENERGY AND MINES

Mr. Raymond W. Payne, Director, Mineral Policy
Mr. Lyle D. Skinner, Senior Mineral Economist

MANITOBA DEPARTMENT OF FINANCE

Mr. M. Buchart, Research Analyst
Mr. J. Patrick Gannon, Asst. Deputy Minister, Federal-Provincial Relations and Research

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

Dr. J. Craven, Manager, Transportation Research
Mr. W.D. Graham, Director, Transportation Programs
Mr. Boris R. Hryhorczuk, Deputy Minister, Highways and Transportation
Mr. K.M. Jardine, Executive Director, Planning, Design and Land Surveys
Mr. R. Savoie, Senior Analyst, Transportation Policy
Mr. D.A. Schaefer, Director, Transportation Policy
Mr. J.B. Wallace, Executive Director, Transportation Policy, Programs and Research

MANITOBA DEPARTMENT OF INDUSTRY, TRADE AND TOURISM

Mr. Michael Clarke, Senior Development Officer, Industry Branch
Mr. Rene Frey, Senior Export Services Officer
Mr. Bob Jack, Senior Development Officer, Industry Branch
Mr. Len LeBrun, Senior Development Officer, Industry Branch
Mr. Barry C. Mitchell, Senior Development Officer, Industry Branch
Mr. Ellis Shippam, Senior Development Officer, Industry Branch
Mr. Brian Walker, Development Officer, Industry Branch
Mr. M.S. Wallace, Manager, Sectoral Development Section, Industry Branch

MARKETING BOARDS

Ms. Diane Antonsen, Assistant Controller, Freshwater Fish Marketing Corporation
Ms. Irene Gaudreau, Manitoba Hog Producers' Marketing Board
Ms. Penny Kelly, General Manager, Manitoba Egg Producers' Marketing Board
Mr. John R. Kruzenga, Marketing Manager, Manitoba Beef Commission
Mr. Ken McLean, General Manager, Manitoba Vegetable Producers' Marketing Board
Mr. Ray M. Rudy, Supervisor, Transportation, Manitoba Milk Producers' Marketing Board
Mr. Burt F. Waters, General Manager, Manitoba Chicken Broiler Producers' Marketing Board and Manitoba Turkey Producers' Marketing Board

MANITOBA MOTOR TRANSPORT BOARD

Mr. Don Norquay, Chairman

MANITOBA AIR CARRIERS

Mr. Blaine Coffyne, Director - Manitoba/Western Ontario, Canadian Airlines Int.
Mr. Rod D. Dewar, formerly Director - Manitoba/Western Ontario, Canadian Airlines Int.
Mr. S. Barry Hutchings, Maintenance Manager, Air Canada
Mr. Gordon H. Thorvaldson, Director - Cargo Revenue Accounting, Air Canada
Mr. W. Trafford, Director, Operations, The Gemini Group

MANITOBA RAILWAY INDUSTRY

Mr. R.B. Boyd, Asst Vice-President, Grain Marketing, CN Rail
Mr. F. Campbell, Vice-President, Prairie Region, CN Rail
Mr. J. Louis DiFruscia, General Manager, Marketing and Sales, Grain, CP Rail
Mr. D.B. Duncan, Regional Manager, Planning and Research Services, CN Rail,
Mr. C.E. Minto, Assist. General Manager, Operation and Maintenance, CP Rail
Mr. M. Parson, Assist. Superintendent, Grain Operations, CP Rail
Mr. Garry Pichlyk, Regional Manager, Sales Support and Administration, VIA Rail Canada Inc.
Mr. D.E. Stirling, Manager, Export Grain, CP Rail

MANITOBA MOTOR CARRIER INDUSTRY

Mr. Paul E. Albrechtsen, President, Paul's Hauling Ltd.
Mr. Fred Arnold, Assistant General Manager, Arnold Bros.
Mr. Thomas E.J. Bell, Vice-President, Sales and Marketing, Canadian Motorways,
Mr. Dennis Clarke, Manager, Gardewine North
Mr. Cedric Coleman, President, Southeast Transport Systems, Steinbach
Mr. Gary Coleman, General Manager, Southeast Transport Systems

Mr. Ron R. Daneliuk, Branch Manager, Yellow Freight System, Inc.
Mr. Ray Downey, Terminal Manager, Trimac
Mr. Bob P. Dolyniuk, Terminal Manager, Kingsway Transports Ltd.
Mr. John Friesen, Sales & Operations Manager, Fastrax, Day & Ross
Mr. R.J. Gaunt, Terminal Manager, Consolidated Freightways Corp.
Mr. Al Harris, General Manager, Manitoba Trucking Association
Mr. Sandy Hopkins, Director of Marketing and Sales, Atomic Transportation System Inc.
Mr. Ken Kinley, Gladstone Transfer
Mr. Ron LeClerc, Area Terminal Manager, CP Express & Transport
Mr. Paul J. Maley, Manager, Truck Leasing and Rentals, Parkside Ford Sales
Mr. Arthur J. Oakes, Vice-President, Finance, Kleysen Transport
Mr. Milton Penner, President, Penner International Inc.
Mr. Paul D. Putnam, Branch Sales Manager, Right-O-Way, Day and Ross
Mr. G.F. Reimer, Vice President, Reimer Express Enterprises Ltd.
Mr. George Smith, President, George Smith Trucking
Ms. Anne Struk-Savage, Personnel Coordinator, Canadian Motorways Ltd.
Mr. Louie Tolaini, President, TransX Ltd.
Mr. Clarence Yackel, Regional Manager, Porter Trucking Ltd.

MANITOBA FREIGHT FORWARDERS

Mr. Ken J. Jamieson, Branch Manager, Cottrell Transport Inc.
Mrs. Linda McDonald, Account Executive, Cole Freight Inc.

MANITOBA TRANSPORTATION LABOUR UNIONS

Mr. Frank Bain, Secretary-Treasurer, Teamsters Union Local 979
Mr. Al Cerilli, Regional Vice President, Canadian Brotherhood of Railway, Transport and General Workers
Mr. Scott Dawson, Federation General Chairman, Brotherhood of Maintenance of Way Employees
Mr. Clive Derham, Representative, Canadian Union of Public Employees (CUPE)
Ms. Barbara Greville, President, Airline Division of CUPE Local 4013
Mr. Barry Henry, Local Chairperson for United Transportation Union (UTU) Local 1874
Mr. Paul Hitchman, Chairman, Council 7, Canadian Air Lines Pilots Association(CALPA)
Mr. A. MacDuff, Vice General Chairman, Transportation Communications Union
Mr. Hugh Mawhinney, Chairman, International Association of Machinists and Aerospace Workers
Mr. Edward Mazur, Secretary Treasurer, International Association of Machinists and Aerospace Workers
Mr. Ginter Schneider, Vice Chairman, Executive Board, Brotherhood of Maintenance of Way Employees
Mr. Peter Seagris, General Chairman, Brotherhood of Locomotive Engineers

Mr. Reg Stepa, Vice-Chairman, Council 7, Canadian Air Lines Pilots Association (CALPA)
Mr. H. Typa, General Chairman, Prairie Region, Brotherhood Railway Carmen
Mr. Art M. Wattis, National President, Rail Canada Traffic Controllers

MANITOBA TRANSPORT EQUIPMENT MANUFACTURERS

Mr. Walter G. Anderson, Marketing Manager, Canadian Bronze Co. Ltd.
Mr. R. Murray Auld, Chairman, NRC Advisory Board for the Canadian Institute of Industrial Technology
Mr. R.A. Carter, Vice President, Sales & Marketing, Standard Aero Limited
Mr. B. Albert Cerqueira, Director, Business Development and Planning, Unisys Canada Inc.
Mr. E. N. Dolynchuk, Assistant Plant Manager, Griffin Steel Foundries Ltd.,
Mr. Bryan C. Hall, Sales and Marketing Consultant, Trailer Systems 2000 Inc.
Mr. Robert C. Hamaberg, President, Standard Aero Limited
Mr. Murray A. Jones, Chief Financial Officer, New Flyer Industries Limited
Mr. Paul F. Perrault, Director of Purchasing and Stores, Bristol Aerospace Limited
Mr. E.H. Purvis, President, Purvis Navcon Shipyard Ltd., Selkirk
Mr. Gordon B. Sampson, President, Boeing of Canada Ltd.

PRAIRIE ELEVATOR COMPANIES

Mr. A.E. Berry, Executive Manager, Corporate Operations, United Grain Growers Limited
Mr. G. Caplap, Capital Priorities Analyst, Manitoba Pool Elevators
Mr. Thomas Cascisa, Manager, Rail Transportation Cargill Limited
Mr. K.J. Cooksley, Manager, Transportation Administration, Alberta Wheat Pool
Mr. Ed H. Guest, Secretary-Manager, Western Grain Elevator Association
Mr. J.G. Halls, Transportation Policy and Land Management, Pioneer Grain Company Limited
Mr. Ronald B. Weik, Transportation Co-ordinator, Country Services Division, Saskatchewan Wheat Pool

MANITOBA MANUFACTURING INDUSTRY

Mr. Alex Anstruther, Manager, Technical Services, Phillips Paint Products Ltd.
Mr. Doug Atchison, Wholegoods Manager, Cereal Implements Ltd.
Mr. Mike J. Babulic, Superintendent, Traffic and Transportation, Inco. Ltd.
Mr. Dave Bradshaw, Distribution Manager, Wescott Fashions Ltd.
Mr. Richard A. Brown, Traffic Manager, Northern Telecom Canada Ltd.
Mr. Mick Bronstein, Materials Manager, Toro Canada Ltd.
Mr. Parnell Bursey, Plant Manager, Labatt's (Manitoba) Brewery Ltd.
Mr. Gordon Cable, Distribution Manager, Simplot Chemical Company Ltd.

Mr. Richard Carlyle, Traffic Mgr., Reliance Products
Mr. Doug R. Collins, Transportation Co-ordinator, Dominion Tanners
Mr. Larry Cousins, Controller, Spruce Products Ltd.
Mr. Jerry Dupuis, General Manager, Andres Wines Ltd.
Mr. Lyle Fisher, Purchasing Manager, Farm King Allied Inc.
Mr. Joe Frend, General Sales Manager, Beverage Services
Mr. Leroy Friesen, Vice-President, Midland Manufacturing Ltd.
Mr. Frank Gillis, President, Gillis Quarries
Mr. Rick Grimshaw, Manager, Cando Contracting Ltd.
Mr. Ted Grym, Plant Manager, 3M Canada Inc.
Mr. Leonard Guenther, Office and Transportation Manager, Granny's Poultry Cooperative Ltd.
Mr. Marv Hannem, President, Mead Petroleum Ltd.
Mr. Dave Harris, Traffic Manager, CSP Foods Ltd.
Mr. Bruce Henry, Distribution Manager, McCain Foods Ltd.
Mr. W.S. Huska, Traffic Superintendent, Manfor Ltd.
Mr. Ian A. James, Traffic Manager, Manitoba Rolling Mills
Mr. Brian Johnson, Traffic Manager, Dominion Bridge
Mr. Douglas Jones, Manager, Campbell Soup Company Ltd.
Mr. A.K. Kading, President and General Manager, Behlen Industries Ltd.
Mr. Ed Kehler, Traffic Manager, Tupperware Company
Mr. Doug Kozlowski, Traffic Manager, The Seagram Company Ltd.
Mr. Chris C. Lerm, Fleet and Distribution Manager, Beatrice Foods Ltd.
Mr. Jack Letkeman, Traffic Manager, Barkman Concrete Ltd.
Mr. Kurt Letkeman, Accounts Payable Supervisor, D.W. Friesen and Sons Ltd.
Mr. John Lysak, Transportation Manager, Versatile Farm Equipment Ltd.
Mr. Larry Mackie, Plant Manager, Simplot Chemical Company Ltd.
Mr. K.J. MacRae, Production Manager, MacMillan Bathurst Inc.
Mr. Joe Malko, President, Furniture West
Mr. Barry Matthes, Traffic and Sales Co-ordinator, Manitoba Sugar Co.
Mr. William McGuire, Asst. Pulp Mill Superintendent, Abitibi-Price Inc.
Mr. Bill Nelson, Traffic Manager, Springhill Farms Ltd.
Mr. Dave Oravec, Sales Administrator, Inland Cement Ltd.
Mr. Sandy Peterson, Manager, Cold Spring Granite
Mr. Don Pottinger, C.E.O., Simplot Chemical Company Ltd.
Mr. George Ransom, Finance Manager, Inventronics Ltd.
Mr. Cam Reid, Sales Representative, Feed-Rite Ltd.
Mr. Brian A. Ross, Co-ordinator, Transportation and Distribution, Hudson Bay Mining and Smelting Co. Ltd.
Mr. Lyle Scrymgeour, President, Canadian Printing Industry Association
Mr. Brian J. Swanson, Traffic Manager, Burns Meats
Ms. May Town, Assistant Office Manager, Export Packers Co. Ltd.
Ms. Sandra Turner, Traffic Manager, Carnation Foods Co. Ltd.

Mr. Henry Unrau, Traffic Manager, Loewen Windows Ltd.
Mr. Donald M. Walker, Office Manager, The Seagram Company Ltd.
Mr. Bernie Whetter, Wheat City Seeds Ltd.
Mr. Ray Winston, Executive Director, Manitoba Fashion Institute Inc.
Mr. Stan P. Wiseman, Manager, Material Control, Federal Pioneer Ltd.

PUBLIC INTEREST GROUPS

Consumers Association of Canada
- Ms. Jennifer Hillard, Manitoba President

Manitoba Chamber of Commerce Transportation Committee
- Mr. Roger Gripp, Chairman

Manitoba Motor League
- Mr. Michael J. Colledge, President

Transport 2000
- Mr. David Osborne, President, Manitoba Chapter

Winnipeg Chamber of Commerce Transportation Committee
- Mr. Sandy Hopkins, Chairman

REGIONAL DEVELOPMENT CORPORATIONS

Eastman Regional Development Inc.
- Mr. Charles Gauthier, General Manager

Pembina Valley Development Corp.
- Mr. Sam Schellenberg, General Manager

Brandon Economic Development Board
- Mr. Terry E. Payne, General Manager

Winnipeg Business Development Corporation
- Mr. E.A. George, General Manager
- Mr. Karl H. Fabian, Business Development Officer

Norman Regional Development Corp.

- Mayor Mark Ingebrigtson, Churchill
- Mr. Dale R. Johnson, General Manager
- Mr. Alan W. Johnson, Port Manager, Port of Churchill
- Mayor Don MacLean, City of Thompson
- Mayor Gord Mitchell, City of Flin Flon
- Ms. Norma Taylor, Chairperson Transportation Committee

Interlake Development Corporation Inc.

- Ms. Shannon Burchard, General Manager

Note: This list does not include colleagues at UMTI and in other areas of the University, consultants, or the helpful assistance provided by the Statistics Canada Office in Winnipeg. It also excludes telephone contacts with a number of Manitoba carriers and transport equipment manufacturers.